

1. PERSONAL DETAILS



Name: Josep Puigmartí-Luis
Place of birth: Artés (Barcelona), Spain
Date of PhD award: 16 January 2008
Nationality: Spanish
Actual address: C/ Can Tarumbot 19
City: Viladecavalls (Barcelona, Spain)

Researcher ID: A-5302-2015
Orcid ID: 0000-0002-7510-9815
Postal code: 08232
Web page:

<https://www.ub.edu/cheminflowgroup/home/>



2. RESEARCH AND INTERNATIONAL RECOGNITION

Prof. Dr. Josep Puigmartí-Luis is the head of the ChemInFlow group located at the University of Barcelona (UB), see website: <https://www.ub.edu/cheminflowgroup/home/>. He completed his PhD in supramolecular chemistry at the Institut de Ciències dels Materials de Barcelona (ICMAB) and during that time, he realized that the control of fluid flow phenomena would be crucial to make new advances in chemistry and materials science. Therefore, the research activities of his group are centred on controlling fluid flow phenomena to command chemical processes (kinetics of reactions) and to harness the engineering of functional materials in solution and at surfaces. This research area has gained much attention in recent years, and he has contributed to its dissemination with, for example, an invited review article published in Chemical Society Reviews, where Prof. Puigmartí-Luis is the only author (Chem. Soc. Rev. 2014, 43, 2253-2271). As proof of the quality of his research work, Prof. Puigmartí-Luis was awarded the *Premi Antoni de Martí i Franquès de Ciències Químiques* award from the Institut d'Estudis Catalans in 2008 and he received the *St. Jordi award* from the Institut d'Estudis Catalans and the Societat Catalana de Química for his work on supramolecular functional materials. He received a competitive postdoctoral *ETH fellowship* in 2009 and in 2012, he was nominated as a *Ramon y Cajal (RyC) researcher*. In 2014, and after two years as RyC researcher, Prof. Puigmartí-Luis moved his group back to Switzerland, where he gained considerable experience in the management of International, European and National projects (see below). As an independent Group Leader, he has supervised senior scientists, postdocs, PhD students, master students and technicians. He also taught two courses at ETH Zürich and continuously contributes to workshops and summer schools every year. In 2015, Prof. Puigmartí-Luis was awarded an *ERC Starting Grant*, a *Chair of Excellence* (France) in 2018, and a *Visiting Professor at the University of Valencia* in 2019, among other merits (see below). In September 2019, Josep Puigmartí-Luis was appointed an ICREA Research Professor (Full Professor), and since August 2020, his research group has been based at the Universitat de Barcelona. Since August 2020, Prof. Puigmartí-Luis has been also affiliated with the Institut de Química Teòrica i Computacional (IQTC), serving as a distinguished representative of the IQTC, which was honoured with the "Maria de Maeztu" Unit of Excellence, CEX2019-000919-M, in 2021. Since 2023, Prof. Puigmartí-Luis joined the Management Committee of the EU4MOFs COST Action.

3. ACADEMIC EDUCATION

PhD	Centre	Date
PhD in Material Science	Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)	Sep 2005 Jan 2008
and European Mention in the Doctoral Diploma	<i>Named as a Severo Ochoa Research Centre by the Ministry of Economy and Competitiveness (MINECO)</i> Campus de la Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain	
Thesis' director	Prof. Dr. David B. Amabilino	
Title of PhD dissertation:	<i>'Molecular Organizations of Tetrathiafulvalenes in Monolayers and Fibres'</i> <i>Summa Cum Laude Distinction</i>	
Master Degree (PhD)	Centre	Date
Masters in Materials Science	Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) Campus de la Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain	Sep 2003 Feb 2005
Further Higher Education degree	Centre	Date

Masters in Chemistry and Food Engineering Instituto Químico de Sarrià (IQS)
Via Augusta, 390, 08017 Barcelona, Spain

Sep 2002
June 2003

<i>University Degree</i>	<i>Centre</i>	<i>Date</i>
Degree in Chemistry	Universitat Autònoma de Barcelona (UAB) Bellaterra Campus de la Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain	Sep 1997 June 2002

4. CURRENT PROFESSIONAL POSITION

Position: ICREA Research Professor at the Faculty of Chemistry, University of Barcelona

Postal Address: Martí i Franquès, 1-11, 08028 Barcelona, Spain

e-mail: josep.puigmarti@ub.edu; group web page: <https://www.ub.edu/cheminflowgroup/home/>

5. FELLOWSHIPS AND AWARDS

<i>Award</i>	<i>Institution</i>	<i>Date</i>
Advanced Materials Award	International Association of Advanced Materials (IAAM)	2025
	Advanced Materials Award is one of the most important honours that the International Association of Advanced Materials confers upon elite scientists and researchers working to interface the Materials Science, Engineering, and Technology to recognize their achievements and accomplishments	
Visiting Professor	Changchun University of Science and Technology (CUST) (China)	2023 - Present
Visiting Professor	Beijing Institute of Technology (BIT) (China)	2019 - Present
Management Committee Member to COST Action (CA22147)	COST ACTION	2023
Rising Star Award	IEEE 3M-NANO	2023
Advanced Research Accreditation / Accreditation as Full Professor	Agència per a la Qualitat del Sistema Universitari de Catalunya (AQU Catalunya)	2023
First-stage approval ERC Advanced grant	European Research Council	2022
Distinguished representative member of IQTC	Awarded Unit of Excellence “Maria de Maeztu” CEX2019-000919-M by Ministerio de Ciencia e Innovación	2021
Emergent consolidated research group	Funding to support the scientific activity of research groups in Catalonia (SGR-Cat 2021)	2021
Pathfinder EU Project	European Innovation Council / Prof. Puigmartí-Luis is the PI	2021
Visiting Professor	University of Valencia	2019
Chair of Excellence	Nanosciences Foundation: Université Grenoble Alpes	2018
European FET Open	EU commission / Prof. Puigmartí-Luis is the scientific & technical manager	2018
Visiting Professor	University of Angers (France) https://www.lumomat.fr/international/partenaires/	2017
Visiting Researcher	Kyoto University and iCeMS Institute (Japan)	2017
ERC Grantee	European Research Council (ERC-StG-2015, Grant number: 677020)	2015
Marie Curie Grantee	Marie Curie Career Integration Grant	2012-2014
Ramon y Cajal Researcher (Assistant Professor)	Awarded Ramón y Cajal (RyC) researcher, the prestigious Spanish tenure-track position.	2012
Beatriu de Pinós Postdoctoral Grant	Catalan Government (declined in favour of RyC researcher)	2012
Antoni de Martí y Franquès	Antoni de Martí y Franquès. Award given by the Institut d'Estudis Catalans (IEC) (www.iec.cat)	2009

'ETH Fellow'	Awarded 'ETH Fellow' for a project entitled 'In-situ formation of three-dimensional bendable networks by microfluidic guided self-assembly'. <i>First promotion.</i>	2008
Mobility Grant. U. of Liverpool (UK)	Catalan Government	2007
St. Jordi Award	St. Jordi Award given by the Catalan Society of Chemistry.	2006
Mobility Grant. KU Leuven (Belgium)	EU commission; COST Scientific Mission	2006
FI Fellowship	FI Fellowship given by the Catalan Institute of Nanotechnology (ICN) and AGAUR. <i>First promotion.</i>	2003-2007
Erasmus scholarship	European Union	2001

6. PREVIOUS PROFESSIONAL AND SCIENTIFIC POSITIONS

Position	Institution	Date
Chair of Excellence	The Nanosciences Foundation, Université Grenoble Alpes	April 2018- Dec 2022
Group Leader	Eidgenössische Technische Hochschule Zürich (ETH Zürich) Department of Chemistry and Applied Bioscience, Switzerland	August 2016- July 2020
Group Leader	Swiss Federal Laboratories for Materials Science & Technology (Empa)	March 2014- July 2016
Group Leader (RyC)	Consejo Superior de Investigaciones Científicas (CSIC) Material Science Institute of Barcelona (ICMAB)	Jan 2012-Feb 2014
Postdoctoral Researcher	Eidgenössische Technische Hochschule Zürich (ETH Zürich) Department of Chemistry and Applied Bioscience, Switzerland	August 2008- Dec 2011
Postdoctoral Researcher	Katholieke Universiteit Leuven Chemistry department, Laboratory for Photochemistry & Spectroscopy, B-3001 Heverlee, Belgium	March 2008 - July 2008

7. FUNDING

> **23,800,000 €** in funded projects since 2009, just after finishing my PhD.
> **19,700,000 €** in funded projects during my time at the University of Barcelona, not including the ERC grant.
> **4,200,000 €** in cooperative research funding obtained at the University of Barcelona since my incorporation.

- 1) **Project Title: 'FLUENS'**
Financial Entity: Swiss National Funds
Amount: CHF 2,062,060 (2,191,709.96 €) from where 436,206.80 € to Universitat de Barcelona (UB)
Centre: ETH Zurich
Duration From: June 2025 to April 2029
Principal Investigator: Prof. Salvador Pané and Prof. J. Puigmartí-Luis Co-PI
- 2) **Project Title: 'SONOCRAFT: High-throughput ultrasound-based volumetric 3D printing for tissue engineering' (101187842 — SONOCRAFT)**
Financial Entity: HORIZON-EIC-2024-PATHFINDEROPEN-01 (EIC Pathfinder Open 2024)
Amount: 2,999,625.00 € total from where 882.000 € to Universitat de Barcelona (UB)
Centre: University of Barcelona
Duration From: April 2025 to March 2029
Principal Investigator: Prof. J. Puigmartí-Luis
- 3) **Project Title: 'GREENS: A Training Programme on 5R's implementation in the design, manufacturing and application of micro and nanorobotic platforms' (101169173 — GREENS)**
Financial Entity: HORIZON-MSCA-2023-DN-01-01 — MSCA Doctoral Networks 2023
Amount: 4,031,589.60 € total from where 503.942,40 € to Universitat de Barcelona (UB)
Centre: University of Barcelona
Duration From: February 2025 to January 2029
Principal Investigator: Dr. Maria Guix and Prof. J. Puigmartí-Luis is Co-PI
- 4) **Project Title: 'Towards a decarbonized chemical industry: enhancing the performance of Cu oxide nanocatalysts in carbon dioxide electrolyzers'(2023 CLIMA 00011)**

Financial Entity: AGAUR

Amount: 208,395.00 € total (22,000.00€ to ChemInFlow group)

Centre: University of Barcelona

Duration From: January 2024 to January 2026

Principal Investigator: Dr. Roc Matheu Montserrat and Prof. J. Puigmartí-Luis is Co-PI

- 5) **Project Title: ‘European metal-organic framework network: combining research and development to promote technological solutions’ (EU4MOFs).**
Financial Entity: COST Action (2023-2027), CA22147
Amount: 680,000.00 € total
Duration From: November 2023 to October 2027
Principal Investigator: Prof. Stefan Wuttke, Prof. Puigmartí-Luis (Management Committee)
- 6) **Project Title: ‘EVA: ME 3D printing technology – the revolution of actuatable composites’ (EVA - 101047081)**
Financial Entity: HORIZON-EIC-2021-PATHFINDEROPEN-01
Amount: 2,109,624 € total from where 629.875,00 € to Universitat de Barcelona (UB)
Centre: University of Barcelona
Duration From: October 2022 to September 2026
Principal Investigator: Prof. J. Puigmartí-Luis
- 7) **Project Title: ‘Ajuts per donar suport a l'activitat científica dels grups de recerca de Catalunya SGR - Grup consolidate’ (SGR-Cat 2021 SGR 00270)**
Financial Entity: Agencia de Gestión de Ayudas Universitarias y de Investigación (AGAUR)
Amount: 36,000 € total
Centre: University of Barcelona
Duration From: October 2022 to September 2024
Principal Investigator: Prof. J. Puigmartí-Luis
- 8) **Project Title: ‘Synthesis and controlled growth of metal-organic frameworks with microfluidic technologies’ (ESTORE)**
Financial Entity: Ministerio de Ciencia e Innovación (Project number: PID2020-116612RB-C33)
Amount: 151.250,00 € to University of Barcelona (UB)
Centre: University of Barcelona
Duration From: September 2021 to August 2024
Principal Investigator: Dr. Eniko Gyorgy/ Prof. J. Puigmartí-Luis is the project leader at UB
- 9) **Project Title: ‘MAGnetically steerable wireless Nanodevices for the tarGeted delivery of therapeutIc agents in any vascular rEgion of the body (ANGIE - 952152)’**
Financial Entity: European Commission; FET PROACTIVE; Call: H2020-EIC-FETPROACT-2019
Amount: 4,000,000.00 € from where 550,000.00 € to University of Barcelona (UB)
Centre: University of Barcelona
Duration From: January 2021 to December 2024
Principal Investigator: Prof. Salvador Pané and Prof. J. Puigmartí-Luis is the project leader at UB
- 10) **Project Title: ‘New approaches to nano-engineer MOF films for electronic and biotechnology applications (M-O-Films)’**
Financial Entity: Nanosciences Foundation: Université Grenoble Alpes
Amount: 351,000.00 €
Centre: Nanosciences Foundation: Université Grenoble Alpes
Duration From: January 2019 to December 2022
Principal Investigator: Prof. J. Puigmartí-Luis
- 11) **Project Title: ‘Functional 2D porous crystalline materials (2DMats)’**
Financial Entity: Swiss National Funds
Amount: CHF 600,000.00 (637,281.00 €)
Centre: ETH Zürich
Duration From: January 2019 to August 2023
Principal Investigator: Prof. J. Puigmartí-Luis
- 12) **Project Title: ‘Bioactive gas delivery by microrobots equipped with porous material’**
Financial Entity: Kyoto University; SPIRITS 2018
Amount: 25,000.00 €
Duration From: September 2018 to August 2020

Principal Investigator: Prof. Shuhei Furukawa, Prof. J. Puigmartí-Luis (Project Partner)

- 13) **Project Title: ‘Ultra-versatile Structural PRINTing of amorphous and tuned crystalline matter on multiple substrates’ (SPRINT)**
Financial Entity: European Commission
Amount: 2,999,997.50 € (435,375.00 € to ETH Zürich)
Centre: ETH Zürich
Duration From: September 2018 to February 2023
Principal Investigator: Prof. J. Puigmartí-Luis is the Scientific and Technical manager
- 14) **Project Title: ‘Chemobionics’ (CBrio)**
Financial Entity: CMST Action CA17120 (European Cooperation in Science and Technology)
Amount: Approximately 100,000 €
Duration From: 2018 to 2021
Principal Investigator: Participant and Member of the Steering Committee (Switzerland)
- 15) **Project Title: ‘CoInFun2’**
Financial Entity: Swiss National Founds
Amount: CHF 91,886.00 (97,663.24 €)
Centre: ETH Zürich
Duration From: April 2018 to March 2019
Principal Investigator: Prof. J. Puigmartí-Luis
- 16) **Project Title: ‘MOFs go Micro/Nanorobotics’ (MOFBOTS)**
Financial Entity: ETH Zürich
Amount: CHF 225,300.00 (239,465.51 €)
Centre: ETH Zürich
Duration From: September 2017 to August 2020
Principal Investigator: Prof. J. Puigmartí-Luis, co-applicant
- 17) **Project Title: ‘Microfluidic Crystal Factories (μ-CrysFact): a breakthrough approach for crystal engineering’**
Financial Entity: European Research Council, ERC starting grant
Amount: 1,814,128.00 €
Centre: ETH Zürich
Duration From: September 2016 to August 2022
Principal Investigator: Prof. J. Puigmartí-Luis
- 18) **Project Title: ‘Controlled Crystal Growth and Large-Scale Integration of Functional Materials by Microfluidic Means’ (CoInFun)**
Financial Entity: Swiss National Founds
Amount: CHF 491,900 (522,827.72 €)
Centre: ETH Zürich
Duration From: May 2015 to April 2019
Principal Investigator: J. Puigmartí-Luis
- 19) **Project Title: ‘Development of spun cell-scaffolds for biomimetic 3D tissue formation for use in blood propulsion systems’**
Financial Entity: Empa
Amount: CHF 590,000 (627,095.66 €)
Centre: Empa
Duration From: 2015 to 2018
Principal Investigator: J. Puigmartí-Luis, co-applicant
- 20) **Project Title: ‘From molecules to crystals - how do organic molecules form crystals?’ (Crystallize)**
Financial Entity: CMST COST Action CM1402 (European Cooperation in Science and Technology)
Amount: Approximately 100,000 €
Duration From: 2015 to 2018
Principal Investigator: Participant and Member of the Steering Committee (Switzerland)
- 21) **Project Title: ‘Electrochemical Processing Methodologies and Corrosion Protection for Device and Systems Miniaturization’**
Financial Entity: COST Action MP1407 (European Cooperation in Science and Technology) (oc-2014-1-18648)
Amount: Approximately 100,000 €

Duration From: 2015 to 2018

Principal Investigator: Participant (82 participants) and Member of the Steering Committee (substitute member of the Steering Committee chair in Switzerland)

- 22) **Project Title: 'IRENA: Intelligent responsive nanofibers'**
Financial Entity: Swiss National Science Foundation (NRP: 406240_126128)
Amount: CHF 117,523 (124,912.14 €)
Centre: Empa
Duration From: 2014 to 2015
Principal Investigator: J. Puigmartí-Luis
- 23) **Project Title: 'Supramolecular Chirality in Low and Charge Transport: Preparation of Chiral Organic Functional Materials'**
Financial Entity: Spanish Ministry of Science and Innovation (MAT2013-47869-C4-2-P)
Amount: 89,796 €
Centre: Institut de Ciència de Materials de Barcelona (CSIC)
Duration From: 2014 to 2017
Principal Investigator: J. Puigmartí-Luis, co-applicant
- 24) **Project Title: 'Multistage Logic Platforms' (MuLoPla)**
Financial Entity: European Commission (PCIG-11-GA-2012-32139)
Amount: 100,000 €
Centre: Institut de Ciència de Materials de Barcelona (CSIC)
Duration From: 2012 to 2016
Principal Investigator: J. Puigmartí-Luis
- 25) **Project Title: 'Microfluidic-based synthesis of molecular aggregates and nanostructures'**
Financial Entity: Generalitat de Catalunya, AGAUR, Beatriu de Pinós programme (2013 BP_B 00256)
Amount: 91,022 €
Duration From: 2013 to 2015
Principal Investigator: J. Puigmartí-Luis. Formally Co-applicant
- 26) **Project Title: 'A novel approach for Microfluidic platforms incorporating pneumatic'**
Financial Entity: GICSERV-B Program: 8th call (NGG-261)
Amount: One-year free access to the clean room facility at CNM-CSIC
Duration From: 2012 to 2013
Principal Investigator: J. Puigmartí-Luis
- 27) **Project Title: Support for research of the Ramón y Cajal Fellowship**
Financial Entity: Spanish Ministry of Science and Innovation
Amount: 208,890 €
Duration From: 2012 to 2014
Principal Investigator: J. Puigmartí-Luis
- 28) **Project Title: Support for research of the ETH Post-Doctoral Fellowship**
Financial Entity: ETH Zürich
Amount: CHF 193,000 (205,134.68 €)
Duration From: 2009 to 2011
Principal Investigator: J. Puigmartí-Luis

7.1. FUNDINGS AS A HOST GROUP / PROMOTION AND SUPPORT OF RESEARCHERS

- 1) **Project Title: 'Rational Design of Biocompatible 2D Antimonene Nanoarchitectures for Biomedical Applications' (DCURLS - RL001884)**
Financial Entity: La Caixa Foundation
Amount: 300,000.00€
Programa: Junior Leader de 'La Caixa'
Centre: Universitat de Barcelona
Duration From: July 2024 to June 2027
Principal Investigator: Mario Palacios Corella
- 2) **Project Title: Ayudas para contratos predoctorales para la formación de doctores/as (FPI)**

Financial Entity: Ministerio de ciencia e innovación
Programa: Programa Estatal para Desarrollar, Atraer y Retener Talento
Centre: Universitat de Barcelona
Duration From: December 2023 to November 2027
Principal Investigator: Gemma Llauredó i Capdevila

- 3) **Project Title: Ramón y Cajal Fellowship. 1st position in his category.**
Financial Entity: Ministerio de ciencia e innovación
Amount: 236,350.00 €
Centre: Universitat de Barcelona
Duration From: January 2023 to August 2023 - Declined in favour of Serra Hunter Lecturer position
Principal Investigator: Albert Cortijos Aragonès
- 4) **Project Title: “La Caixa” Junior Leader. – Incoming Fellowship. 1st position in panel - remote evaluation**
Financial Entity: La Caixa Foundation
Amount: 305,100.00 €
Centre: Universitat de Barcelona
Duration From: July 2022 to December 2022 - Declined in favour of Ramón y Cajal Fellowship
Principal Investigator: Albert Cortijos Aragonès
- 5) **Project Title: “La Caixa” Junior Leader – Incoming Fellowship**
Financial Entity: La Caixa Foundation
Amount: 237,000 €
Centre: Universitat de Barcelona
Duration From: June 2022 to December 2022 - Declined in favour of Ramón y Cajal Fellowship
Principal Investigator: Roc Matheu Montserrat
- 6) **Project Title: Subprograma Ramón y Cajal**
Financial Entity: Agència Estatal d'Investigació i pel Fons Social Europeu, MCIN/AEI
Amount: 324,250 €
Centre: Universitat de Barcelona
Duration From: March 2022 to February 2027
Principal Investigator: Maria Guix Noguer
- 7) **Project Title: Beatriu de Pinós Postdoctoral Fellowship**
Financial Entity: Catalan Government/European Commission
Amount: 144,300.00 €
Centre: Universitat de Barcelona
Duration From: January 2022 to June 2022 - Declined in favour of “La Caixa” Junior Leader
Principal Investigator: Albert Cortijos Aragonès
- 8) **Project Title: Juan de la Cierva - Incorporación 89% 1st position in his category.**
Financial Entity: Science Spanish Ministry/European Commission
Amount: 111,300.00 €
Centre: Universitat de Barcelona
Duration From: January 2022 to January 2022 - Declined in favour of Beatriu de Pinós (not used)
Principal Investigator: Albert Cortijos Aragonès
- 9) **Project Title: María de Zambrano Grant (100%, 1st position in his category)**
Financial Entity: Universities Spanish Ministry
Amount: 140,000.23 €
Centre: Universitat de Barcelona
Duration From: January 2022 to January 2022 - Declined in favour of Juan de la Cierva (not used)
Principal Investigator: Albert Cortijos Aragonès

8. SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Since 2020, 16 TFG, 4 Master students, 11 PhD students, 12 Postdoctoral researchers, 4 Senior Scientist and 7 Visiting students.

As a group leader at ChemInFlow Group (Universitat de Barcelona)

Current Members

<i>Name</i>	<i>Function in the group</i>	<i>Date</i>
Yasmine	PhD student	01 Nov 2025 present
Hiroya Takahashi	PhD student	01 Nov 2025 present
Jing Shi	Visiting PhD student from BIT, China	01 Oct 2025 present
Maria Aurora Guarduci	Postdoctoral Researcher	Feb 2025 present
Mario Palacios Corella	Senior Scientist (Junior Leader La Caixa Fellowship)	1 July 2024 present
James Nicholas	Postdoctoral Researcher	1 April 2024 present
Natalia Salvat Lozano	Industrial PhD student (IDEADED-UB)	Oct 2023 present
Dr. Maria Guix Noguera	Senior Scientist (Ramón y Cajal)	2022 present
Dr. Beltzane Garcia Cirera	Postdoctoral Researcher (Project and Lab manager)	1 Oct 2022 present
Thao Nguyen	PhD student	10 June 2022 present
Tuan Ngo	PhD student	01 Oct 2022 present
Gemma Llauradó i Capdevila	PhD student	2022 present
Dr. Albert Cortijos i Aragonès	Associate Professor (Serra Hunter), Senior Scientist	2023 28 Nov 2025 – Permanent position
Dr. Alessandro Sorrenti	Associate Professor, Senior Scientist	2021 12 Dec 2025 – Permanent position

Former members

<i>Name</i>	<i>Function in the group</i>	<i>Date</i>
Miquel Adell	Master Student	1 Oct 2024 20 July 2025
Eray Tabak	Visiting PhD student from Istanbul Technical University, Turkey	01 May 2025 30 June 2025
Andrea María García García	TFG student (Dr. James Nicholas and Prof. Josep Puigmartí)	01 Feb 2025 26 June 2025
John Patrick Palma Lomboy	TFG student (Dr. Maria Guix and Prof. Josep Puigmartí)	01 Feb 2025 25 June 2025
Artur Falcón Acuña	TFG student (Dr. mario Palacios and Prof. Josep Puigmartí)	01 Feb 2025 25 June 2025
Pedro Guilherme Reis Alves	PhD student located in Portugal, co-supervised with Dr. Tiago Sotto Mayor	9 Sept 2020 20 May 2025
Nicolás Arisnabarreta	Visiting Postdoctoral Researcher from Katholieke Universiteit Leuven (Belgium)	01 April 2024 31 Dec 2024
Ramón Santiago Herrera Restrepo	PhD student	Sept 2020 Dec 2024
Xu Huang	Visiting PhD student from Sun Yat-sen University (China)	01 Dec 2023 25 Sept 2025
Gabriel	Visiting Undergraduate student from Universidad Nacional Autónoma de Mexico (Mexico)	17 June 2024 20 August 2024
Cole Fredericks	Visiting Undergraduate student from University of Waterloo (Canada)	2 May 2024 20 July 2024
Maria Aurora Guarducci	Visiting PhD student from La Sapienza, Università di Roma (Italy)	01 Sept 2023 03 May 2024

Silvia Vegliani	Master student with a mobility grant from Politecnico di Torino (Italia)	01 Oct 2023 09 April 2024
João Pedro Vale	PhD student located in Portugal, co-supervised with Dr. Tiago Sotto Mayor	16 Sept 2019 08 March 2024
Miquel Adell Roca	TFG student	Oct 2023 Jan 2024
Marco Cornejo Paredes	TFG student	Oct 2023 Jan 2024
James Nicholas	PhD student	2019 15 Dec 2023
Dr. Michele Mattera	Postdoctoral Researcher	2020 31 Dec 2023
Dr. Albert Cortijos i Aragonès	<i>STM/AFM</i> Senior Scientist	2021-2023
Judit Boix Comella	TFG student	March 2023 June 2023
Mauri Serra Roger	TFG student	March 2023 June 2023
Marina Luque Artero	TFG student	Oct 2022 Jan 2023
Clàudia Martínez Verdi	TFG student	Oct 2022 Jan 2023
Dr. Andreas Cavegn	Postdoctoral Researcher	2021 2022
Natalija Pantalon Juaj	Visiting PhD student from Ruđer Bošković Institute (Croatia)	05 March 2022 23 April 2022
Cesc Vidal Vilaseca	TFG student f	Feb 2022 June 2022
Diego Briseño Oloriz	TFG student	Feb 2022 June 2022
Guillem Mangues Estany	TFG student	Oct 2021 Jan 2022
Dr. Yonca Belce	Postdoctoral Researcher	2020 2022
Dr. Octavio Graniel Tamayo	Postdoctoral Researcher Located in France, hired through the Chair of Excellence	2019 2022
Martí Sanz Mir	Master student	2021 2022
Gemma Llauradó i Capdevilla	Master student	Feb 2022 Jul. 2022
Gemma Llauradó i Capdevila	Optional master subject – Recerca pràctica	Set 2021 Jan 2022
Martí Sainz Mir	Optional master subject – Recerca pràctica	2021 2022
Dr. Pablo Bulit	Postdoctoral Researcher	2019 2021
Lidia de Gregorio Perpiñá	TFG student	2020 2021
Gemma Llauradó i Capdevilla	TFG student	Feb 2020 Jul 2021
David Mínguez Colomer	TFG student	Oct 2020 Jan 2021
Martí Sainz Mir	TFG student	2020 2021
Dr. David Rodríguez	Postdoctoral Researcher	2019 2021
Dr. David Aguilà Aviles	Postdoctoral Researcher	2020 2021
Dr. Alessandro Sorrenti	Postdoctoral Researcher	2017 2021

Anastasia Terzopoulou	PhD student	2017 2021
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As an ERC fellow at ETH Zürich

<i>Name</i>	<i>Function in the group</i>	<i>Date</i>
Dr. Alessandro Sorrenti	Postdoctoral Researcher	2017-2020
Dr. David Rodriguez	Postdoctoral Researcher	2019-2021
Dr. Carlos Franco Pujante	Postdoctoral Researcher	2017-2020
Semih Sevim	PhD student	2017-2020
Anastasia Terzopoulou	PhD student	2017-2021
Alexander Hernández Oendra	Master student	2017
Lewis Jones	Master student	2017
Afshin Abrishamkar	PhD student	2014-2018

As a group leader at Empa

<i>Name</i>	<i>Function in the group</i>	<i>Date</i>
Dr. Giuseppino Fortunato	Senior Scientist	2014-2016
Dr. Haijiang Zhang	Postdoctoral Researcher	2015-2016
Bhuwan Ghimire	PhD student	2015-2017
Afshin Abrishamkar	PhD student	2014-2017
Gökce Yazgan	PhD student	2014-2016
Manel Beldi	Master student	2014

* Mr. Bhuwan Ghimire terminated his PhD project due to personal reasons related with his health.

During Postdoctoral position at ETH Zürich

<i>Name</i>	<i>Project title</i>	<i>Date</i>
Urs Hartfelder	'Metal Organic and Hybrid Nanowires on Microfluidic Devices' Co-directed with Prof. P. S. Dittrich Experimental work	2010
Tessa Neumann	'Microfluidics for the synthesis of hybrid materials by gold and silver reduction' Co-directed with Prof. P. S. Dittrich Master student	2009

During PhD

<i>Name</i>	<i>Project title</i>	<i>Date</i>
Christophe Theron	Síntesi de derivados del tatratiáfulvaleno Co-directed with Prof. Dr. David B. Amabilino Master student	2007

8.1 COMPLETED THESES, MASTER'S THESES, AND UNDERGRADUATE DISSERTATIONS

Eight PhD candidates, nine Master's students, and sixteen undergraduate students have successfully completed their studies under the supervision of Prof. Puigmartí-Luis.

Abrishamkar garnered seven awards and honours during his Ph.D., while Dr. S. Sevim and Dr. J. Nicholas also received recognition from their Ph.D. work (see section 8.2). This clearly indicates the extraordinary capacity of Prof. Puigmartí-Luis to educate and train students at a very competitive level.

Thesis completed

- 1) **Title:** Numerical Studies on Particle Manipulation in Biological Systems
Author: Pedro Guilherme Reis Alves
Center: Transport Phenomena Research Centre (CEFT), Engineering Faculty of Porto University (FEUP)
Duration: From 09 September 2020 – 26 May 2025
Supervisor: Dr. Tiago Sotto Mayor and Prof. Josep Puigmartí Luis as a Co-Supervisor
- 2) **Title:** Development of materials with increasing structural complexity: from Chiral Stationary Phases to Covalent Organic Polymers and Metal Organic Frameworks
Author: Maria Aurora Guarducci
Center: Sapienza Università di Roma
Duration: From 01 November 2021 – 20 December 2024
Supervisor: Prof. Claudio Villani and Prof. Josep Puigmartí Luis as a Co-Supervisor
- 3) **Title:** Clot-in-a-Chip and Innovative Programmable Materials
Author: Ramón Santiago Herrera Restrepo
Center: Universitat de Barcelona
Duration: From October 2020 – 12 December 2024
Supervisor: Prof. Josep Puigmartí Luis, Prof. Jordi Ignés Molló
- 4) **Title:** Numerical Analysis of Transport Phenomena to Control Reactive Processes in Microfluidic Applications
Author: João Pedro Vale
Center: Porto University
Duration: 08 March 2024
Supervisor: Dr. Tiago Sotto Mayor and Prof. Josep Puigmartí Luis as a Co-Supervisor
- 5) **Title:** Developing non-equilibrium approaches to control the self-assembly of functional supramolecular systems
Author: James Nicholas
Center: ETH Zurich
Duration: From 1 July 2019 to 20 December 2023
Supervisor: Prof. Andrew J. DeMello and Prof. Josep Puigmartí Luis as a Co-Supervisor
- 6) **Title:** Metal-organic framework-based Microrobots for biomedical applications
Author: Anastasia Terzopoulou
Center: ETH Zurich
Duration: 5 of August 2021
Supervisor: Prof. Salvador Pané and Prof. Josep Puigmartí Luis as a Co-Supervisor
- 7) **Title:** Controlled Self-Assembly via Microfluidics: A Tool for Pathway Selection in Material Synthesis and Processing
Author: Semih Sevim
Center: ETH Zurich
Duration: 25 of November 2020
Supervisor: Prof. Andrew J. DeMello and Prof. Josep Puigmartí Luis as a Co-Supervisor
- 8) **Title:** Microfluidic Environments: A Useful Platform for Synthesis, Study and Processing of Crystalline Materials
Author: Afshin Abrishamkar
Center: ETH Zurich
Duration: From XXX to 14 September 2018
Supervisor: Prof. Andrew J. DeMello and Prof. Josep Puigmartí Luis as a Co-Supervisor

Master thesis completed

- 1) **Title:** Rational Design of Antimonene Two-Dimensional Nanosheets for Biomedical Applications
Author: Miquel Adell Roca
Center: Master student
Duration: From September 2024 – 10 July 2025
Supervisor: Prof. Josep Puigmartí Luis and Dr. Mario Palacios as a Co-Supervisor
- 2) **Title:** Flexible electronics for in situ monitoring of clot-in-chip generation in microfluidic devices
Author: Silvia Vegliani
Center: Master student with a mobility grant from Politecnico di Torino (Italia)
Duration: 09 April 2024
Supervisor: Prof. Josep Puigmartí Luis and Dr. Maria Guix as a Co-Supervisor

- 3) **Title:** Controlled growth of MOF crystals under microgravity mimicking conditions using microfluidic environment
Author: Martí Sanz Mir
Center: Universitat de Barcelona
Duration: From September 2021 to February 2022
Supervisor: Prof. Josep Puigmartí Luis
- 4) **Title:** Confined synthesis of functional matter and its effects on morphogenesis
Author: Gemma Llauredó Capdevila
Center: Universitat de Barcelona
Duration: From September 2021 to July 2022
Supervisor: Prof. Josep Puigmartí Luis
- 5) **Title:** Microfluidics as a tool to control self-assembly
Author: Alexander Hernández Oendra
Center: ETH Zurich
Duration: From 2016 to 2017
Supervisor: Prof. Josep Puigmartí Luis
- 6) **Title:** Controlled growth of metal-organic materials in microchannels
Author: Lewis Jones
Center: ETH Zurich
Duration: From 2016 to 2017
Supervisor: Prof. Josep Puigmartí Luis
- 7) **Title:** Membranes à Morphologie Variable obtenues par Electrospinning
Author: Manel Beldi
Center: Empa (Switzerland)
Duration: From 2013 to 2014
Supervisor: Prof. Josep Puigmartí Luis
- 8) **Title:** Microfluidics for the synthesis of hybrid materials by gold and silver reduction
Author: Tessa Neumann
Center: ETH Zurich
Duration: From 2008 to 2009
Supervisor: Prof. Josep Puigmartí Luis
- 9) **Title:** Síntesi de derivados del tatratiáfulvaleno
Author: Christophe Theron
Center: ETH Zurich
Duration: From 2006 to 2007
Supervisor: Prof. Josep Puigmartí Luis

Undergraduate dissertations

- 1) **Title:** Controlled formation of cylindrical micelles using microfluidic devices
Author: Andrea María García García
Center: Universitat de Barcelona
Duration: From February to July 2025
Supervisor: Prof. Josep Puigmartí Luis and Dr. James Nicholas
- 2) **Title:** Microfluidic Printing of Prussian Blue based Electrodes.
Author: Artur Falcón Acuña
Center: Universitat de Barcelona
Duration: From February to July 2025
Supervisor: Prof. Josep Puigmartí Luis and Dr. Mario palacios Corella
- 3) **Title:** Spatially controlled chaotic mixing in microfluidic devices using local geometrical features to enhance reactivity conditions
Author: John Patrick Palma Lomboy
Center: Universitat de Barcelona
Duration: From February to July 2025
Supervisor: Prof. Josep Puigmartí Luis and Dr. Maria Guix Noguera

- 4) **Title:** Microfluidic synthesis of 3D Covalent Organic Frameworks (COF's)
Author: Miquel Adell Roca
Center: Universitat de Barcelona
Duration: From October 2023 to January 2024
Supervisor: Prof. Josep Puigmartí Luis and Dr. Michele Mattera
- 5) **Title:** Fabrication and characterization of clot-in-chip platforms
Author: Marco Cornejo Paredes
Center: Universitat de Barcelona
Duration: From October 2023 to January 2024
Supervisor: Prof. Josep Puigmartí Luis and Dr. Maria Guix
- 6) **Title:** Clot-in-chip fabrication by continuous flow approaches
Author: Judit Boix Comella
Center: Universitat de Barcelona
Duration: From March to June 2023
Supervisor: Prof. Josep Puigmartí Luis and Dr. Maria Guix
- 7) **Title:** Biomolecular guest induced helical supramolecular polymers under microfluidic
Author: Mauri Serra Roger
Center: Universitat de Barcelona
Duration: From March to June 2023
Supervisor: Prof. Josep Puigmartí Luis and Dr. Mohit Kumar
- 8) **Title:** Controlled clot formation in microfluidic co-flowing devices
Author: Marina Luque Artero
Center: Universitat de Barcelona
Duration: From October 2022 to January 2023
Supervisor: Prof. Josep Puigmartí Luis Dr. Maria Guix
- 9) **Title:** Biomolecular guest induced supramolecular assembly under microfluidics control
Author: Clàudia Martínez Verdi
Center: Universitat de Barcelona
Duration: From October 2022 to January 2023
Supervisor: Prof. Josep Puigmartí Luis
- 10) **Title:** Microfluidic-based bottom-up assembly of nanocellulose fibres
Author: Cesc Vidal Vilaseca
Center: Universitat de Barcelona
Duration: From February to June 2022
Supervisor: Prof. Josep Puigmartí Luis
- 11) **Title:** Optimization and controlled synthesis of bacterial cellulose nanofibers via a microfluidic approach
Author: Diego Briseño Oloriz
Center: Universitat de Barcelona
Duration: From February to June 2022
Supervisor: Prof. Josep Puigmartí Luis
- 12) **Title:** Fast and easy fabrication of Au tips suitable for Scanning Tunneling Microscopy and tip-enhanced Raman spectroscopy by electrochemical etching
Author: Guillem Mangues Estany
Center: Universitat de Barcelona
Duration: From October 2021 to January 2022
Supervisor: Prof. Josep Puigmartí Luis
- 13) **Title:** Development of a redox active colloidal system for dissipative self-assembly
Author: Gemma Llauradó i Capdevila
Center: Universitat de Barcelona
Duration: From February to January 2021
Supervisor: Prof. Josep Puigmartí Luis
- 14) **Title:** Synthesis and optimization of Layered Double Hydroxides (LDH) microstructures using microfluidic methods

Author: Lúdia de Gregorio Perpiñá
Center: Universitat de Barcelona
Duration: From October 2020 to January 2021
Supervisor: Prof. Josep Puigmartí Luis

- 15) **Title:** Controlled growth of Covalent Organic Frameworks Nanoparticles
Author: David Mínguez Colomer
Center: Universitat de Barcelona
Duration: From October 2020 to January 2021
Supervisor: Prof. Josep Puigmartí Luis
- 16) **Title:** Controlled growth of MOF crystals under microgravity mimicking conditions using microfluidic environments
Author: Martí Sainz Mir
Center: Universitat de Barcelona
Duration: From October 2020 to January 2021
Supervisor: Prof. Josep Puigmartí Luis

8.2. AWARDS TO Ph.D. STUDENTS OF THE GROUP AND OTHER GROUP MEMBERS

- **Mr. James Nicholas** received two Awards for:

- Best oral presentation at the Thursday Morning Science (TMS) Day (Sep 2023).
TMS is an event organised by the Università degli Studi dell'Aquila and it is a multidisciplinary scientific conference with topics related to chemistry, physics, biology, and biotechnology.
- Best poster in Organometallic Chemistry from all the communications presented at Symposium S11: New Functional Systems from Self-Assembly during the XXXVIII BIENNIAL MEETING OF THE SPANISH SOCIETY OF CHEMISTRY conference in June 2022.

- **Dr. Albert C. Aragonès** received

- The Young Researcher Award from “la Real Sociedad Española de Química (RSEQ)” in 2022.

- **Mr. Semih Sevim** received

- The 2019 “Chemistry Travel Award” from the Swiss Academy of Sciences (SCNAT), together with the Swiss Chemical Society (SCS).

- **Mr. Afshin Abrishamkar** has received seven awards and honours:

- Travel Grant by Iran’s National Elites Foundation for a talk at Uni. Isfahan (Dec. 2017)
- Travel Grant by Swiss Society for Crystallography (Nov. 2017)
- Finalist (runner-up) in 2017 SLAS Discovery & Technology Art Science Contest (May 2017)
- Travel grant by European Cooperation in Science & Technology (COST) (May 2017)
- Travel Grant by Iran’s National Elites Foundation for a talk at Isfahan Uni. Of Tech. (Dec. 2016)
- Registration Fee Waiver Grant by the Conference Organizing Committee MOF 2016 (Oct. 2016)
- Finalist (honourable mention) in 2016 JALA & JBS Art Science Contest (May 2017)

9. TEACHING ACTIVITIES

Function	Lecture / University	Date
Lecturer	Laboratory practicum at the Faculty of Chemistry University of Barcelona (UB)	2020-present
Lecturer	European School on Molecular Nanoscience (ESMolNa2022)	Academic year 2021-2022
Lecturer	European School on Molecular Nanoscience (ESMolNa2021)	Academic year 2020-2021
Lecturer	European School on Molecular Nanoscience (ESMolNa2020)	Academic year 2019-2020
Lecturer	I am invited to give lectures: Masters in Nanoscience and Materials Science University Autonomous of Barcelona (UAB)	2019
Lecturer	European School on Molecular Nanoscience ESMolNa2019	Academic year 2018-2019

Lecturer	<i>Microfluidics for Microbial Ecology</i> <i>ETH Zurich</i>	Academic year 2016-2019
Lecturer	<i>Course on experimental fluid dynamics</i> <i>Biomicrofluidic Engineering; MAKE Project</i> <i>ETH Zurich</i>	Academic year 2017-2019
Lecturer	<i>Course on experimental fluid dynamics Microdroplet formation and stability</i> <i>ETH Zurich</i>	Academic year 2016-2018
Lecturer	<i>European School on Molecular Nanoscience</i> <i>ESMolNa2018</i>	Academic year 2017-2018
Lecturer	<i>University of Angers</i> https://www.lumomat.fr/international/partenaires/	Academic year 2017-2018
Lecturer	<i>European School on Molecular Nanoscience</i> <i>ESMolNa2017</i>	Academic year 2017-2018
Lecturer	<i>Master of Applied Materials Chemistry</i> <i>University of Barcelona (UB)</i>	Academic year 2016-2017
Lecturer	<i>European School on Molecular Nanoscience</i> <i>ESMolNa2016</i>	Academic year 2016-2017
Lecturer	<i>Masters in Nanoscience and Materials Science</i> <i>University Autonomous of Barcelona (UAB)</i>	Academic year 2013-2014
Lecturer	<i>XIV Spanish National School of Molecular Materials</i>	Academic year 2013-2014
Lecturer	<i>The life of a researcher: a view on science for the general public</i> <i>Different secondary schools in Catalonia</i>	Academic year 2012-2013 and 2013-2014

10. DISSEMINATION ACTIVITIES FROM ChemInFlow GROUP

19.11.2025: Press. Regió 7, in its science section, interviewed Prof. Puigmartí about the results obtained within the ANGIE project, for which Professor Puigmartí's group holds the role of work package leader. In this project, researchers have developed a pioneering system that uses magnetic microrobots to deliver medication with high precision to specific anatomical sites within the body, such as narrow cerebral arteries, sensitive regions of the nervous system, or deep and otherwise inaccessible tissues affected by solid tumours, localised infections or inflammatory lesions. The technology combines a clinical-grade magnetic field, a precision catheter and biodegradable microcapsules that release drugs only upon reaching the targeted location. This approach enables localised treatment, lowering doses, boosting efficacy and drastically minimising systemic side effects. Animal studies demonstrate safe, real-time external guidance. Key challenges include overcoming weak magnetic forces and ensuring accurate navigation in complex vascular environments. The **ChemInFlow group**, directed by Professor Puigmartí, contributes its expertise in the design, synthesis and controlled behaviour of micro- and nanostructured materials. Within the context of this work, its role is linked to the development and optimisation of the **biodegradable microcapsules ("capsule-robots")** used to transport and release therapeutic agents with high spatial precision, which were synthesised using microfluidic technologies, one of the key expertise of the group. <https://www.regio7.cat/bages/2025/11/19/revolucio-medica-amb-segell-bagenc-123866738.html>

31.05.2025: Prof. Puigmartí-Luis' group, i.e., the ChemInFlow group, participates at the **18a Festa de la Ciència** with the workshop entitled **Nanociència en Moviment**. With this workshop, the ChemInFlow group introduces the concepts of nanorobots, COFs, MOFs and microfluidics to the youngest ones.

28.05.2025: Prof. Puigmartí-Luis participated as a speaker at the ICMAB **Alumni Day**. The seminar provides insights into post-PhD career options, outlining advantages and challenges.

2023 – present: Prof. Puigmartí-Luis' group, i.e., the ChemInFlow group, collaborates with **Nanoinventum**. **Nanoinventum** is a project that aims to incorporate science and nanotechnology into primary education. By creating a course specifically designed for schools, **Nanoinventum** enables students to become familiar with scientific language and cultivate their passion for nanotechnology.

- 2023: the ChemInFlow group contributed to the development of a comic titled '¡Nanobiotico!' to illustrate the potential actions that a nanorobot can provide for healing the human body.
- 30.04.2024: Dr. Maria Guix and Dr. Beltzane Garcia-Cirera visited Sagrada Família School to talk about nanorobots. In groups, the pupils designed their own robots to treat diseases or make cures.
- 14.05.2025: Dr. Maria Guix and Dr. Beltzane Garcia-Cirera visited Madorell School (Molins de Rei, Barcelona) to talk about nanorobots. In groups, the pupils designed their own robots to treat diseases or make cures. On the 28th of May, they participate in the **Awards Ceremony of Nanoinventum**.

2023 – present: Dr. Maria Guix and Dr. Beltzane Garcia-Cirera collaborated with the **Magnet project**. The programme is

targeted at schools that have an unbalanced social composition with respect to their reference territory, and that have a teaching staff committed to develop innovative projects. Participating institutions are institutions of reference and excellence in a specific field of knowledge which have an educational commitment to society, and a great capacity to transfer innovation and knowledge.

- March 2023: third-year students at the Madorell School in Molins de Rei. The collaboration involved dissemination activities related to the water cycle and microplastic contamination.
- March 2024: First-year students at the Madorell School in Molins de Rei. The collaboration involved dissemination activities related to the water cycle and microplastic contamination.

11. ORGANISATION OF SCIENTIFIC MEETINGS

<i>Function</i>	<i>Conference and Summer School</i>	<i>Date</i>
Member of the organization committee and Hosting	<i>WUR Day (Wageningen University & Research). Scientific Exchange between WUR, ICMAB and UB PhD' students</i> Universitat de Barcelona	6 – 7 May 2025
Member of the organization committee	<i>Active nano/microsystems in the Spanish context (AMES 2024)</i> Universitat de Barcelona	24 – 25 October 2024
Organizer	<i>7th International Conference on Manipulation, Automation and Robotics at Small Scale (MARSS 2024)</i> Delft, the Netherlands	1 – 4 June 2024
Organizer	<i>Special session, titled "Matter in motion" at MARSS in Abu Dhabi</i>	12 October 2023
Organizer	<i>Symposium between Beijing Institute of technology (BIT) and ETH Zürich</i>	16-17 October 2019
Invited to organize a session	<i>International Conference of Coordination Chemistry (ICCC) in 2018 at Sendai</i>	30 July-4 August 2018
Member of the organization committee	<i>International Conference 'Chirality at the Nanoscale'</i> Sitges, Spain	17–21 September 2007
Member of the organization committee	<i>VII Escuela Nacional de Materiales Moleculares</i> Boí Taüll, Lleida, Spain	29 March–6 April 2005

12. INSTITUTIONAL RESPONSIBILITIES, MEMBERSHIPS, COMMISSIONS

Member of the Global Partner week of the Beijing Institute of Technology (BIT) in China a Representative of the University of Barcelona (UB)	2025
Member of the Steering Committee for the COST project EU4MOFS	2023
Member of the Grupo Especializado de Cristalografía y Crecimiento Cristalino (GE3C)	2021
Evaluator for the French National Research Agency (ANR) & Austrian Science Fund (FWF)	2021
Editorial Board member of Molecules (MDPI)	2020
Member of a PhD evaluation committee at Universidad Rey Juan Carlos	2020
Member of a PhD evaluation committee at Universidad Autónoma de Madrid	2020
Member of a PhD evaluation committee at Université de Bordeaux	2019
Member of a PhD evaluation committee at Catalan Institute of Nanoscience and Nanotechnology (ICN2), Spain	2018
Evaluator of InterTalentum projects	2018
Member of a PhD evaluation committee at Univ. of Barcelona, Spain	2018
Guest Editor, Special issue Editor "Microfluidic Platforms for Crystallography" (http://www.mdpi.com/journal/crystals/special_issues/Microfluidic_Crystal)	2018
Member of the Steering Committee for the COST project Chemobionics (chair in Switzerland)	2018
Member of a PhD evaluation committee at Univ. of Barcelona, Spain	2017
Member of the Steering Committee for the COST project Crystalize (chair in Switzerland)	2015
Member of the Swiss Chemical Society (SCS)	Since 2015
Organiser of the Raman Spectroscopy Symposium, 1 day, at Empa-Swiss Federal Laboratories for Materials Science & Technology, Switzerland	2014
Member of a PhD evaluation committee at Univ. Geneva, Switzerland	2014

Member of the Royal Society of Chemistry (MRSC)	Since 2013
Member of the Scientific Program 'New Materials in Your Classroom', First Prize of the ReachOut, Competition Award E-MRS Spring 2014	2013
Reviewer for Nature Publishing Group, Chemical Society Reviews, Angewandte Chemie, Advanced Materials, Lab on a Chip, Journal of Materials Chemistry, Langmuir, among others	Since 2008
Member of the Real Sociedad Española de Química	Since 2006
Member of the Grupo NanoMatMol (www.nanomatmol.org)	Since 2006

12.1. MEMBER OF PhD EVALUATION COMMITTEE

- 1) **Title:** Learning-based control of ultrasound microrobots in Pathological vascular flow
Author: Mahmoud Mohamed Aboelwafa Medany
Center: ETH Zürich
Date: 24 November 2025
Supervisor: Prof. Dr. Daniel Ahmed
- 2) **Title:** Multi-metallic Multivariate Metal–Organic Frameworks Based on *meta*-Carborane: Synthesis and Characterization
Author: Xiao-Bao Li
Center: Institut de Ciència de Materials de Barcelona (ICMAB) – Universitat Autònoma de Barcelona (UAB)
Date: 17 October 2025
Supervisors: Dr. José Giner Planas
- 3) **Title:** A Microrobotic Tissue Factory for Guided Assembly of Cell Clusters and Drug Screening in Microtumors
Author: Philipp Richard Harder
Center: Vollständiger Abdruck der von der TUM School of Computation, Information and Technology der Technischen Universität München zur Erlangung eines, Munich
Date: 09 October 2025
Supervisors: Prof. Berna Özkale Edelmann
- 4) **Title:** Clinically Ready Magnetic Microrobots for Targeted Drug Delivery
Author: Fabian C. Landers
Center: ETH Zurich
Date: 08 September 2025
Supervisors: Prof. Dr. Salvador Pané and Prof. Dr. Bradley J. Nelson
- 5) **Title:** Design and synthesis of novel MOF-based materials: tailoring functional properties for advanced applications
Author: Albert Rosado Morente
Center: Institut de Ciència de Materials de Barcelona (ICMAB) – Universitat Autònoma de Barcelona (UAB)
Date: 08 April 2025
Supervisors: Prof. Concepción Domingo Pascual and Dr. Ana M. López Periago
- 6) **Title:** Magnetic microcatheters, micro- and nanorobots for treatment of spinal cord diseases
Author: Harun Torlakcik
Center: ETH Zürich
Date: 22 August 2024
Supervisors: Prof. Salvador Pané, Prof. Bradley Nelson
- 7) **Title:** Smart engineered nanomaterials for water cleaning applications: from adsorption to catalysis
Author: Andrea Veciana Picazo
Center: ETH Zürich
Date: 26 June 2024
Supervisors: Prof. Salvador Pané, Prof. Bradley Nelson
- 8) **Title:** A Hybrid Microfluidic Device for Label Free manipulation and Size- Independent Separation of Microentities
Author: Abdulla Al Ali
Center: Khalifa University, Abu Dhabi
Date: 3 June 2024
Supervisors: Dr. Anas Alazzam, Dr. Eiyad Abu-Nada
- 9) **Title:** Processing and Design of Group (IV) Reticular Platforms: nanoparticles, thin films and crystals
Author: Maria Romero Angel

Center: Universitat de Valencia

Date: 12 January 2024

Supervisors: Prof. Carlos Martí Gastaldo, Prof. Sergio Tatay Aguilar

- 10) **Title:** [Unraveling the Fundamental Aspects of Enzyme-powered Micromotors](#)
Author: Francesc Xavier Arqué Roca
Center: Institute for BioEngineering of Catalonia (IBEC), Universitat de Barcelona
Date: 24 January 2023
Supervisors: Prof. Samuel Sánchez Ordóñez, Dra. Tania Patiño Padial
- 11) **Title:** [Rational Design and Synthesis of Water Stable Metal organic Frameworks Using meta carborane based Bidentate Ligands and Their Singularity driven Applications](#)
Author: Zhen Li
Center: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Universitat Autònoma de Barcelona
Date: 23 September 2022
Supervisor: Dr. José Giner Planas
- 12) **Title:** [Self-Assembly of Colloidal Metal-Organic Framework Particles into Multidimensional Superstructures](#)
Author: Yang Liu
Center: Institut Català de Nanociència i Nanotecnologia (ICN2), Universitat Autònoma de Barcelona
Date: 21 June 2022
Supervisors: Prof. Dr. Daniel Maspoch, Dr. Inhar Imaz
- 13) **Title:** [Multifunctional Composites made of Metal-Organic Frameworks and Inorganic Nanoparticles](#)
Author: Gerard Boix i Soler
Center: Institut Català de Nanociència i Nanotecnologia (ICN2), Universitat Autònoma de Barcelona
Date: 25 January 2022
Supervisors: Prof. Dr. Daniel Maspoch, Dr. Inhar Imaz
- 14) **Title:** [Diazonium-based covalent functionalization of Graphitic materials](#)
Author: Yuanzhi Xia
Center: KU Leuven, Belgium
Date: 22 December 2021
Supervisor: Prof. Steven De Feyter
- 15) **Title:** [Enzyme Powered Nanomotors Towards Biomedical Applications](#)
Author: Ana Cândida Hortelão
Center: Institute for BioEngineering of Catalonia (IBEC)Universitat de Barcelona
Date: 3 September 2021
Supervisors: Prof. Samuel Sánchez Ordóñez, Dr. Tania Patiño Padial

13. PRESENTATIONS IN CONGRESSES AND SCHOOLS

Total number 135: 103 Invited Oral Communications; 17 Oral Communications; 15 Posters

- 1) **IV Escuela de Resonancia Paramagnética Electrónica**
(2004) Universidad de Alicante, Spain
Title: 'Self-assembly of TTF amide derivatives'
J. Puigmartí-Luis, C. Rovira, D. B. Amabilino
- 2) **VII Escuela Nacional de Materiales Moleculares**
(29 March-6 April 2005) Boí Taüll, Lleida, Spain
Title: 'Auto-ensamblaje de derivados de TTF en superficies'
J. Puigmartí-Luis, D.B. Amabilino, S. De Feyter, H. Uji-i
- 3) **Marie Curie Research Training Network Chiral Expression and Transfer at Nanoscale**
(2005) Mons, Belgium
Title: 'Solvent and surface dependence on the self -assembly of functional units'
J. Puigmartí-Luis, C. Rovira, D. B. Amabilino
- 4) **Final Meeting of the COST Action D14**
(2005) Hotel Eden Roc, Sant Feliu de Guixols, Spain
Title: 'Self-assembly of TTF derivatives on surfaces'

J. Puigmartí-Luis, D. B. Amabilino, S. De Feyter, H. Uji

- 5) **8th European Conference on Molecular Electronics (ECME8)**
(29 June - 2 July) Bologna, Italy
Title: 'Self-assembly of TTF derivatives on surfaces'
J. Puigmartí-Luis, D. B. Amabilino, S. De Feyter, H. Uji
- 6) **3rd Nanospain Workshop**
(20-23 March 2006) Pamplona, Spain
Title: 'Organogels from simple Self-Assembling Amide derived Tetrathiafulvalenes: En route to Conducting Nanowires'
J. Puigmartí-Luis, A. Pérez del Pino, V. Laukhin, C. Rovira, E. Laukhina, D.B. Amabilino
- 7) **Jornada de Química de Catalunya i del Gran Sud-Oest Francès**
(23-24 November 2006) Institut d'Estudis Catalans, Barcelona, Spain
Title: 'Conducting Supramolecular Nanowires'
J. Puigmartí-Luis, A. Minoia, E. Laukhina, A. Pérez del Pino, H. Uji-i, C. Rovira, J. Cornil, A. Lledós, G. Ujaque, S. De Feyter, R. Lazzaroni, V. Laukhin, D.B. Amabilino
- 8) **XXII Trobades Científiques de la Mediterrània**
(9-11 October 2006) Maó, Spain
Title: 'Organogels from simple self-assembling amide derived tetrathiafulvalenes: En route to conducting nanowires'
J. Puigmartí-Luis, A. Pérez del Pino, V. Laukhin, C. Rovira, E. Laukhina, D. B. Amabilino
- 9) **Nanotech Insight 2007**
(10-17 March 2007) Luxor, Egypt
Title: 'Noncovalent Control for Bottom-Up Assembly of Functional Supramolecular Wires'
D.B. Amabilino, J. Puigmartí-Luis, A. Minoia, H. Uji-i, C. Rovira, J. Cornil, S. De Feyter, R. Lazzaroni
Title: 'Self-assembly of TTF derivatives at surfaces'
J. Puigmartí-Luis, A. Minoia, A. Pérez del Pino, G. Ujaque, C. Rovira, A. Lledós, R. Lazzaroni, H. Uji-i, S. De Feyter, D.B. Amabilino
- 10) **Nano NAIMO M36 Meeting**
(2-4 April 2007) Naples, Italy
Title: 'Organogels from simple self-assembling amide derived tetrathiafulvalenes: En route to conducting nanowires'
J. Puigmartí-Luis, A. Pérez del Pino, V. Laukhin, C. Rovira, E. Laukhina, D. B. Amabilino
Title: 'TTFs that can gelify organic solvents'
J. Puigmartí-Luis, A. Pérez del Pino, V. Laukhin, C. Rovira, E. Laukhina, D. B. Amabilino
- 11) **Chirality at the Nanoscale**
(17-21 September 2007) Sitges, Spain
Title: 'Self-assembly of TTF derivatives on surfaces'
J. Puigmartí-Luis, A. Pérez del Pino, V. Laukhin, C. Rovira, E. Laukhina, D. B. Amabilino
- 12) **7th International Symposium on Crystalline Organic Metals, Superconductors and Ferromagnets**
(24-29 September 2007) Peñíscola, Spain
Title: 'Self-Assembly of TTF derivatives at Surfaces Functional Supramolecular Wires'
J. Puigmartí-Luis, A. Minoia, A. Pérez del Pino, G. Ujaque, C. Rovira, A. Lledós, R. Lazzaroni, H. Uji-i, S. De Feyter, D.B. Amabilino
- 13) **12th NanoTech, Annual European Conference on Micro and Nanoscale Technologies for Biosciences**
(17-19 November 2008) Montreux, Switzerland
Title: 'Microfluidics as a tool to control and direct self-assembly'
J. Puigmartí-Luis, P. S. Dittrich
- 14) **Nano Tech Insight 2009**
(29 March-2 April 2009) Barcelona, Spain
Title: 'Microfluidics as a tool to control and direct self-assembly'
J. Puigmartí-Luis, P. S. Dittrich
- 15) **Analytical Chemistry Symposium: Analyze That**
(13 May 2009) Zürich, Switzerland

Title: 'Microfluidics as a tool to control and direct self-assembly'
J. Puigmartí-Luis, P. S. Dittrich

16) **MicroTAS 2009**

(1-5 November 2009) Jeju, Korea

Title: 'Microfluidic-Guided Assembly of nanoparticles, nanorods and nanowires'
J. Puigmartí-Luis, P. S. Dittrich

17) **Industry Day**

(17 September 2010) Zürich, Switzerland

Title: 'Formation and integration of functional micro-and nanowires on a microfluidic platform'
J. Puigmartí-Luis, P. S. Dittrich

18) **NanoBio Europe 2010**

(15-17 June 2010) Münster, Germany

Title: 'Formation and integration of functional micro-and nanowires on a microfluidic platform'
J. Puigmartí-Luis, P. S. Dittrich

19) **MicroTAS 2010**

(3-7 October 2010) Groningen, Netherlands

Title: 'Simultaneous control of length and location of metal-organic nanowires grown by hydrodynamic focusing in a multilayer microfluidic device'
P. Kuhn, J. Puigmartí-Luis, I. Imaz, D. Maspoch, P. S. Dittrich

20) **MRS 2011**

(25-29 April 2011) San Francisco, USA

Title: 'Guided assembly of nanowires and their integration in microfluidic device'

J. Puigmartí-Luis, P. Kuhn, B. Z. Cvetkovic, D. Schaffhauser, M. Rubio-Martinez, I. Imaz, D. Maspoch, P. S. Dittrich

21) **Lawrence Berkeley National Laboratory**

(2 May 2011) Berkeley, USA

Title: 'Self-Assembly and Microfluidic Guided Assembly of Functional Materials'
J. Puigmartí-Luis (invited by Prof. Miquel Salmeron)

22) **III International Workshop on Analytical Miniaturization and NANotechnologies**

(11-12 June 2012) Barcelona, Spain

23) **MolMat 2012**

(3-6 July 2012) Barcelona, Spain

Title: 'Microfluidic Platforms; a Versatile Synthetic Route'

J. Puigmartí-Luis, Inhar Imaz, Daniel Maspoch, David B. Amabilinob, Petra Dittrich

24) **Institut de Ciències Fotòniques, ICFO**

(17 September 2012) Castelldefels, Spain

Title: 'Microfluidic Platforms; a Versatile Synthetic Route'

J. Puigmartí-Luis (invited by Prof. Jordi Martorell)

25) **Instituto de Microelectrónica de Barcelona IMB-CSIC**

(28 September 2012) Bellaterra, Spain

Title: 'Multifunctional Microfluidic Platforms'

J. Puigmartí-Luis (invited by Dr. Andreu Llobera Adán)

26) **Instituto de Ciencia de Materials de Barcelona ICMAB-CSIC**

(29 October 2012) Bellaterra, Spain

Title: 'Microfluidics, a versatile route towards self-assembly and device fabrication'

J. Puigmartí-Luis (invited by Dra. Rosario Núñez)

27) **VIX Escuela Nacional de Materiales Moleculares**

(3-7 February 2013) Almagro, Spain

Title: 'Nuevos métodos de sintéticos y de localización de materiales moleculares'

J. Puigmartí-Luis

- 28) **Initial Training Network, Dynamol**
(17-19 April 2013) Barcelona, Spain
Title: 'Microfluidics: A way to control self-assembly of functional molecular units'
J. Puigmartí-Luis; J. Puigmartí-Luis also organized and performed a practical course on Microfluidics for Dynamol
- 29) **XXXIV Reunión Bienal**
(15-18 September 2013) Santander, Spain
Title: 'La microfluidica como una herramienta versátil para la síntesi y localización de materiales moleculares'
J. Puigmartí-Luis
- 30) **Workshop at Empa with TUL Poland**
(7-May-2014) St. Gallen, Switzerland
Title: 'Activities Functional Membranes Group'
J. Puigmartí-Luis
- 31) **ARRAYON Biotechnology SA**
(12-May-2014) CSEM, Neuchatel, Switzerland
Title: 'Activities Functional Membranes Group'
J. Puigmartí-Luis
- 32) **University of Geneva**
(25-August-2014) Geneva, Switzerland
Title: 'Microfluidics, a mainstream technology for a myriad of applications'
J. Puigmartí-Luis (invited by Prof. Corinne Vebert)
- 33) **Summer School: 'Electrospinning: Exploiting Electrohydrodynamics and Rheology for the Control of Nanofiber Structural and Physical Properties'**
(1-5 September 2014) Udine, Italy
- 34) **Modern Crystallography in Applied Research**
(8 September 2014) Empa Dübendorf, Switzerland
- 35) **Swiss soft days**
(2 October 2014) EPFL Leusane, Switzerland
- 36) **University of Bern**
(13-February-2015) Bern, Switzerland
Title: 'Microfluidic technologies for materials processing and controlled self-assembly environments' J. Puigmartí-Luis (invited by Prof. Jean-Louis Reymond)
- 37) **Fourth International Conference on Multifunctional, Hybrid and Nanomaterials (Hybrid Materials 2015)**
(9-13 March 2015) Sitges, Spain
Title: 'Block-copolymers as scaffolds for the organization of organic hybrid materials'
M. Riba-Moliner, Gómez-Rodríguez, D. B. Amabilino, J. Puigmartí-Luis, A. González-Campo
- 38) **NRP 62 Smart Materials Final meeting**
(19 March 2015) Gurten, Switzerland
- 39) **Laboratoire MOLTECH-Anjou and University of Angers**
(5 May 2015) Angers, France
Title: 'Microfluidic technologies for materials processing and controlled self-assembly environments'
J. Puigmartí-Luis (invited by Prof. Marc Sallé)
- 40) **1st European Conference on Metal Organic Frameworks and Porous Polymers**
11-14 October 2015) Postdam, Germany
- 41) **Microfluidics Congress, utilizing microfluidic technologies as a tool for progressing medical research and patient care**
(20-21 October 2015) London, United Kingdom
- 42) **Get together Workshop and second Management Committee (MC) meeting of the COST Action e-MINDS**
(28-30 October 2015) Krakow, Poland

- 43) **Institute for Integrated Cell-Material Sciences (WPI-iCeMS) and Kyoto University**
(26 November -3 December 2015) Kyoto, Japan
Title: 'Self-assembly and controlled chemical treatments performed under microscale dynamic conditions'
J. Puigmartí-Luis (invited by Prof. Shuhei Furukawa and Prof. Susumu Kitagawa)
- 44) **The Institute for Molecular Science (ICMol), University of Valencia**
(25 -26 January 2016) Valencia, Spain
Title: 'Self-assembly and controlled chemical treatments performed under microscale dynamic conditions'
J. Puigmartí-Luis (invited by Prof. Eugenio Coronado)
- 45) **The ninth European School on Molecular Nanoscience (ESMolNa2016)**
(29th May -3rd June 2016) Tordesillas, Spain
Title: 'Microfluidics make the difference in self-assembly processes'
J. Puigmartí-Luis (invited by Prof. Eugenio Coronado)
- 46) **Max Planck Institute for Polymer Research**
(28th November 2016) Mainz, Germany
Title: 'Self-assembly processes under dynamic conditions'
J. Puigmartí-Luis (invited by Dr. Markus Bannwarth)
- 47) **Universidad Autonoma de Madrid**
(23rd January 2017) Madrid, Spain
Title: 'Self-assembly processes under dynamic conditions'
J. Puigmartí-Luis (invited by Prof. Jose Aleman)
- 48) **Katholieke Universiteit Leuven (KUL)**
(6th February 2017) Leuven, Belgium
Title: 'Microfluidic technologies; a new method for materials synthesis'
J. Puigmartí-Luis (invited by Prof. Steven de Feyter)
- 49) **Technical University Graz (TU Graz)**
(27th February 2017) Graz, Austria
Title: 'Microfluidics: a technology to control materials engineering'
J. Puigmartí-Luis (invited by Prof. Paolo Falcaro)
- 50) **Laboratoire des Matériaux et du Génie Physique (LMGP)**
(13rd April 2017) Grenoble, France
Title: 'Supramolecular chemistry in flow'
J. Puigmartí-Luis (invited by Dr. David Muñoz-Rojas)
- 51) **Institut Catala de Nanotecnologia**
(5th May 2017) Bellaterra, Spain
Title: 'Supramolecular chemistry in flow'
J. Puigmartí-Luis (invited by Prof. Dani Ruiz)
- 52) **X European School on Molecular Nanoscience (ESMolNa2017)**
(7th May -12th May 2017) Madrid, Spain
Title: 'Microfluidic technologies for in flow chemistry'
J. Puigmartí-Luis (invited by Prof. Eugenio Coronado)
- 53) **Gordon Research Conference**
Self-Assembly & Supramolecular Chemistry
(21st -26th May 2017) Les Diablerets, Switzerland
Title: 'Supramolecular chemistry in flow'
J. Puigmartí-Luis
- 54) **Basque Center for Macromolecular design & engineering - Polymat**
(6th-7th June 2017) San Sebastian, Spain
Title: 'Controlled Self-assembly and Materials Engineering in Flow'
J. Puigmartí-Luis (invited by Prof. Jose Maria Asua)
- 55) **Annual Meeting and Management Committee (MC) meeting of the COST Action Crystalize**

(26-27 June 2017) Lincoln, UK

Title: 'Controlled Self-assembly and Materials Engineering in Flow'

56) **Kansai University**

(5th December 2017) Osaka, Japan

Title: 'Controlled Self-assembly and Materials Engineering in Flow'

J. Puigmartí-Luis (invited by Prof. Hideya Kawasaki)

57) **Kyoto University**

(11st December 2017) Kyoto, Japan

Title: 'Controlled Self-assembly and Materials Engineering in Flow'

J. Puigmartí-Luis (invited by Prof. Shuhei Furukawa)

58) **University of Tokyo**

(15th December 2017) Tokyo, Japan

Title: 'Controlled Self-assembly and Materials Engineering in Flow'

J. Puigmartí-Luis (invited by Prof. Ryota Sakamoto)

59) **Nanosciences Fondation**

(28th February 2018) Grenoble, France

Title: 'Engineering liquid-liquid interfacial reactions for materials synthesis'

J. Puigmartí-Luis (invited by Dr. David Muñoz Rojas)

60) **X European School on Molecular Nanoscience (ESMolNa2018)**

(20th May - 26th May 2018) Tenerife, Spain

Title: 'Engineering liquid-liquid interfacial reactions for materials synthesis'

J. Puigmartí-Luis (invited by Prof. Eugenio Coronado)

61) **Material Science Institute of Barcelona**

(28th July 2018) Barcelona, Spain

Title: 'Engineering reaction-diffusion environments for chemistry and materials science'

J. Puigmartí-Luis (invited by Dr. Arantazu Gonzalez Campo)

62) **43rd International Conference on Coordination Chemistry (ICCC2018)**

(30th July – 4th August 2018) Sendai, Japan

Title: 'Engineering liquid-liquid interfacial reactions for materials synthesis'

J. Puigmartí-Luis (invited by Prof. Shuhei Furukawa)

63) **10th Singapore International Chemistry Conference (ISCC10)**

(16th – 19th December 2018) Singapore, Singapore

Title: 'Engineering reaction-diffusion environments for chemistry and materials science'

J. Puigmartí-Luis (invited by Prof. Donglin Jiang)

64) **BIGHEART Seminar**

(19th December 2018) Singapore, Singapore

Title: 'Engineering reaction-diffusion environments for chemistry and materials science'

J. Puigmartí-Luis (invited by Prof. Alfredo Franco-Obregon)

65) **The SPIRITS International Symposium 'Shaping Self-Assembled Mesoscale (Bio)Materials with Microengineering'**

<https://www.icems.kyoto-u.ac.jp/en/news/4712>

(28th March 2019) Kyoto, Japan

Title: 'Chemistry and materials synthesis employing bioinspired conditions at low Reynolds numbers'

J. Puigmartí-Luis (invited by Prof. Shuhei Furukawa)

66) **12th European School on Molecular Nanoscience**

(19th - 24th May 2019) Elche (Alicante), Spain

Title: 'Bioinspired conditions for chemistry and materials synthesis'

J. Puigmartí-Luis (invited by Prof. Eugenio Coronado)

67) **University of Bari**

(7th June 2019) Bari, Italy

Title: 'Unveiling pathway complexity and triggering pathway selection via nonlinear chemistry'

J. Puigmartí-Luis (invited by Prof. Luisa Torsi)

- 68) **University of Cambridge**
(23rd – 24th September 2019) Cambridge, United Kingdom
Title: ‘A low Reynolds number as a tool for unprecedented materials synthesis’
J. Puigmartí-Luis (invited by Prof. Laura Torrente)
- 69) **3rd International Conference on Metal Organic Frameworks and Porous Polymers (EuroMOF2019)**
(27th - 30th October 2019) Paris, France
Title: ‘Shaping and unveiling pathway complexity in MOFs chemistry’
J. Puigmartí-Luis
- 70) **University of Bordeaux**
(30th October 2019) Bordeaux, France
Title: ‘Shaping single crystals at low Reynolds number’
J. Puigmartí-Luis (invited by Dr. Mat Gonidec)
- 71) **University of Castilla la Mancha**
(21st – 22nd November 2019) Ciudad Real, Spain
Title: ‘How can we control self-assembly and materials engineering?’
J. Puigmartí-Luis (invited by Prof. Maria Antonia Herrero Chamorro)
- 72) **Beijing Institute of Technology (BIT)**
(25th – 28th November 2019) Beijing, China
Title: ‘A low Reynolds number as a tool for unprecedented materials synthesis’
J. Puigmartí-Luis (invited by Prof. Muhua Huang)
- 73) **MRS fall Meeting**
(2nd - 6th December 2019) Boston, United States
Title: ‘Shaping single crystals at low Reynolds number’
J. Puigmartí-Luis
- 74) **Universitat de Barcelona**
(18th December 2019) Barcelona, Spain
Title: ‘A low Reynolds number as a tool for unprecedented materials synthesis’
J. Puigmartí-Luis (invited by Prof. Francesc Illas)
- 75) **The SPIRITS International Symposium “Shaping Self-Assembled Mesoscale (Bio)Materials with Microengineering”**
<http://www.icems.kyoto-u.ac.jp/en/news/5246>
(6th February 2020) Kyoto, Japan
Title: ‘Sub-20 nanometer Covalent Organic Frameworks in water’
J. Puigmartí-Luis (invited by Prof. Shuhei Furukawa)
- 76) **Beijing Institute of Technology (BIT) / Virtual Conference**
(18th December 2020),
Title: ‘Exploiting controlled reaction-diffusion conditions for materials synthesis’
J. Puigmartí-Luis (invited by Prof. Muhua Huang)
- 77) **International Chemical Engineering and Catalysis Conference / Virtual Conference**
(28th January 2021),
Title: ‘Exploiting Controlled Reaction-Diffusion Conditions for the Engineering of Functional Matter’
J. Puigmartí-Luis (invited)
- 78) **14th European School on Molecular Nanoscience**
(24th - 27th May 2021) Benidorm (Alicante), Spain
Title: ‘Simulated microgravity conditions for materials synthesis’
J. Puigmartí-Luis (invited by Prof. Eugenio Coronado)
- 79) **"Ciencia en la red", Grupo Especializado de Cristalografía y Crecimiento Cristalino GE3C**
(15 June 2021), virtual
Title: ‘What can controlled reaction-diffusion conditions offer to self-assembly processes?’
J. Puigmartí-Luis (invited)

https://www.youtube.com/watch?v=ywh-cQDC_KA

- 80) **Innovations and Applied Aspects of Colloid and Interface Science” Summer School**
(14th – 16th July 2021) Varna, Bulgaria
Title: ‘Simulated microgravity conditions for materials synthesis’
J. Puigmartí-Luis (invited)
- 81) **Beijing Institute of Technology (BIT)**
(3rd August 2021),
Title: ‘Is chemistry the only key strategy to successfully control materials synthesis as desired?’
J. Puigmartí-Luis (invited by Prof. Muhua Huang)
- 82) **12th International Congress “Biomaterials and Nano-biomaterials: Recent Advances Safety - Toxicology and Ecology Issues”**
(1st October 2021), Virtual
Title: ‘Microfluidic technologies for chemistry, materials science and biotechnology’
J. Puigmartí-Luis (invited by Prof. Andreas Flouris)
- 83) **Midi MINATEC**
(15 October 2021), Grenoble, France
Title: ‘Microfluidic technologies for materials engineering: Looking back...with a view to the future...’
J. Puigmartí-Luis (invited)
- 84) **XLIV. KÉMIAI ELŐADÓI NAPOK**
(26 October 2021), Brussels, Belgic
Title: ‘Exploiting controlled reaction-diffusion conditions for materials synthesis: Looking back...with a view to the future...’
J. Puigmartí-Luis (invited Prof. Istvan Szilagyi)
- 85) **BeMAGIC Winter School: Magnetoelectricity in biomedicine: healthcare for the 21st century**
(8-12 November 2021), Zurich, Switzerland
Title: ‘Microfluidic technologies for chemistry and materials engineering’
J. Puigmartí-Luis (invited by Prof. Slavador Pané)
- 86) **The International Solvay Institutes for Physics and Chemistry. From 2D to 3D Crystals: A Multi-Scale, Multi-Technique and Multi-System Approach of the Crystallization of Organic Molecules on Tailored Carbon Surface**
(21 to 23 March 2022),
Title: ‘Simulated microgravity conditions for materials synthesis’
J. Puigmartí-Luis (invited by Prof. Yves Geerts)
- 87) **Flow Chemistry Summit 2022 – SELECTBIO**
(17 - 18 March 2022) Boston, United States
Title: ‘Exploiting controlled reaction-diffusion conditions for materials synthesis’
J. Puigmartí-Luis
- 88) **15th European School on Molecular Nanoscience**
(22nd - 27th May 2022) Tordesillas, Spain
Title: ‘What can microfluidic technologies offer?’
J. Puigmartí-Luis (invited by Prof. Eugenio Coronado)
- 89) **Instituto de Nanociencia y Materiales de Aragón (INMA)**
(7 June 2022) Zaragoza, Spain
Title: ‘Microfluidic technologies for chemistry and materials engineering’
J. Puigmartí-Luis (invited by Prof. Jesús Santamaria)
- 90) **Reunión Biental de la Real Sociedad Española de Química (RSEQ)**
(27 June 2022) Palacio de Congresos de Granada
Title: ‘Developing a Redox-Responsive Colloidal system based on host-guest interactions for dissipative self-assembly’
J. Nicholas, J. Puigmartí-Luis (poster presentation)
- 91) **International Conference on Manipulation, Automation and Robotics at Small Scales (MARSS)**
(25-29 July 2022) Toronto, Canada

Title: 'MOFBOTS: Metal-Organic Framework-Based Biomedical Microrobots'
J. Puigmartí-Luis (invited by Prof. S. Pané)

92) **Beijing Institute of Technology (BIT)**

(2nd August 2022),

Title: 'From molecules and assemblies to functional materials by design via microfluidic technologies'

J. Puigmartí-Luis (invited by Prof. Muhua Huang)

93) **University of Burgos**

(9th – 12th November 2022) Burgos, Spain

Title: 'Microfluidic technologies as an advanced tool for chemistry and materials synthesis'

J. Puigmartí-Luis (invited by Prof. Tomás Torroba)

94) **Technical University of Dresden**

(20th – 21st November 2022) Dresden, Germany

Title: 'Microfluidic technologies as an advanced tool for chemistry and materials synthesis'

J. Puigmartí-Luis (invited by Prof. Juliane Simmchen)

95) **2022 MRS Fall Meeting & Exhibit**

(27th November – 2nd December 2022) Boston, United States

Title: 'MOFBOTS: Metal-organic framework-based biomedical magnetic microrobots'

J. Puigmartí-Luis (invited by Prof. S. Pané)

96) **1era REUNIÓ DE QUÍMICA INORGÀNICA I ORGANOMETÀL·LICA de la SCQ**

(2nd -3rd February 2023) Barcelona, Spain

Title: 'Microfluidic technologies as an advanced tool for chemistry and materials synthesis'

J. Puigmartí-Luis

97) **Institute of Science and Technology Austria (ISTA)**

(27-29 March 2023) Wien, Austria

Title: 'Microfluidic technologies as an advanced tool for chemistry and materials synthesis'

J. Puigmartí-Luis (invited by Prof. M. Ibañez)

98) **1st Iberian Symposium on Functional Organic Polymers**

(11-12 May 2023) Aveiro, Portugal

Title: 'Functional materials by design via microfluidic technologies'

J. Puigmartí-Luis (invited by Prof. M. Souto)

99) **18th IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE NEMS 2023)**

(14-17 May 2023) Jeju, Korea

Title: 'MOFBOTS: Metal-Organic Framework-Based Biomedical Microrobots'

J. Puigmartí-Luis (invited by Prof. Hongsoo Choi)

100) **Guangzhou Laboratory**

(30 juny 2023) Guangzhou, China

Title: 'Controlled materials engineering via microfluidic technologies'

J. Puigmartí-Luis (invited by Dr. Xiao Xiaobao)

101) **IEEE International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale (IEEE 3M-NANO)**

(31 July-4 August 2023) Chengdu, China

Title: 'Controlled Materials Engineering via Microfluidic Technologies'

J. Puigmartí-Luis (invited by Prof. Zuobin Wang)

102) **International Biological Island**

(7 August 2023) Guangzhou, China

Title: 'Controlled Materials Engineering via Microfluidic Technologies'

J. Puigmartí-Luis (invited by Dr. Xiaobao Cao)

103) **International Conference on Manipulation, Automation and Robotics at Small Scales (MARSS)**

(10-12 October 2023) Abu Dhabi, UAE

Title: 'Porous crystalline materials in motion'

J. Puigmartí-Luis (invited by Prof. Abdon Pena-Francesch and Prof. Hamed Shahsavan)

- 104) **Changchun University of Science and Technology (CUST)**
(1 December 2023) Changchun, China
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Zuobin Wang)
- 105) **Fudan University**
(4 December 2023) Shanghai, China
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Xiangzhong Chen)
- 106) **16th IEEE International Conference on Nano/Molecular Medicine & Engineering (IEEE-NANOMED 2023)**
(5-8 December 2023) Okinawa, Japan
Title: 'Controlled Materials Engineering via Microfluidic Technologies'
J. Puigmartí-Luis (invited by Prof. Kin Fong Lei)
- 107) **9th International Conference on Bio-Inspiration in Nice - France**
(12-14 December 2023) Nice, France
Title: 'Controlled Materials Engineering via Microfluidic Technologies'
J. Puigmartí-Luis (invited by Prof. Frédéric Guittard)
- 108) **ETH Zurich**
(20 December 2023) Zurich, Switzerland
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Filippo Coletti)
- 109) **Beijing Institute of Technology (BIT)**
(31 March – 12 April 2024) Beijing, China
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Mu Hua Huang)
- 110) **12th World Biomaterials Congress (WBC 2024)**
(26 – 31 May 2024) Daegu, Korea
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Jae-Byum Chang as a Symposium invited speaker)
- 111) **Nanomotors conference Barcelona**
(3– 5 June 2024) Barcelona, Catalonia, Spain
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Samuel Sanchez Ordóñez)
- 112) **3rd Annual Nanoseries Conference**
(17 – 19 June 2024) Lisboa, Portugal
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Ermelinda Maçôas, Prof. Jose Paulo Farinha)
- 113) **N.I.C.E. Conference**
(19 – 21 June 2024) Nice, France
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Frédéric Guittard as a Keynote speaker)
- 114) **International Conference on Manipulation, Automation and Robotics at Small Scale (MARSS2024)**
(1 – 5 July 2024) Delf, Netherlands
Title: 'Revolutionizing Materials Engineering and Processing with Microfluidic Tools'
J. Puigmartí-Luis (invited by Prof. Massimo Mastrangeli, as a Plenary speaker)
- 115) **Eindhoven University of Technology**
(6 July 2024) Eindhoven, Netherlands
Title: 'Controlled non-covalent synthesis via microfluidic technologies'
J. Puigmartí-Luis (invited by Prof. Tania Patiño Padial)
- 116) **9th International Conference on Metal-Organic Frameworks and Open Framework Compounds (MOF2024)**

(15 – 19 September 2024) Singapore, Republic of Singapore
Title: ‘Revolutionizing Materials Engineering and Processing with Microfluidic Tools’
J. Puigmartí-Luis (invited by Prof. Dan Zhao)

117) **Helmholtz-Zentrum Dresden-Rossendorf**

(26 – 28 July 2024) Dresden, Germany
Title: ‘Revolutionizing Materials Engineering and Processing with Microfluidic Tools’
J. Puigmartí-Luis (invited by Dr. Denys Makarov)

118) **Beijing Institute of Technology (BIT)**

(06 – 19 October 2024) Beijing, China
Title: ‘Microfluidic tools for the bioinspired synthesis of artificial functional materials’
J. Puigmartí-Luis (invited by Prof. MuHua Huang)

119) **Active nano/microsystems in Spanish context (AMES24)**

(24 – 25 October 2024) Barcelona, Spain
Title: ‘From Dust to Design with Microfluidic Tools’
J. Puigmartí-Luis (member of the congress organizers. Invited by Dr. Maria Guix and Dr. Julio Bastos)

120) **Changchun University of Science and Technology (CUST)**

(09 – 17 November 2024) Changchun, China
Title: ‘Microfluidic tools for the bioinspired synthesis of artificial functional materials’
J. Puigmartí-Luis (invited by Prof. Zuobin Wang)

121) **Fall meeting & Exhibit (2024 MARS)**

(01 – 06 December 2024) Boston, Massachusetts
Title: ‘Microfluidic tools for the bioinspired synthesis of artificial functional materials’
J. Puigmartí-Luis

122) **N.I.C.E. Winter Event**

(10 – 12 December 2024) Nice, France
Title: ‘Microfluidic Tools for the Bioinspired Synthesis of Artificial Functional Materials’
J. Puigmartí-Luis (Invited by Frédéric Guittard)

123) **Sapienza Università di Roma**

(19 – 20 December 2024) Roma, Italy
Title: ‘From Dust to Design with Microfluidic Tools’
J. Puigmartí-Luis (Invited by Claudio Villani)

124) **Centro de Investigación en Nanomateriais e Biomedicina (CINBIO)**

(27 March 2025) Vigo, Spain
Title: ‘Revolutionizing materials engineering and processing with microfluidic tools’
J. Puigmartí-Luis (Invited by Felix Manuel Freire Iribarne)

125) **247th ECS Meeting**

(18 - 22 May 2025) Montréal, Canada
Title: ‘How can microfluidics tools help during the self-assembly and engineering of supramolecular systems and crystals?’
J. Puigmartí-Luis (Invited by Prof. Tomás Torres)

126) **N.I.C.E. Conference Summer Edition**

(22 - 25 Juny 2025) Nice, France
Title: ‘How can microfluidics tools help during the self-assembly and engineering of supramolecular systems and crystals?’
J. Puigmartí-Luis (Invited by Prof. Frédéric Guittard)

127) **XL Reunión Bienal de la Real Sociedad Española de Química**

(30 June – 3 July 2025) Bilbao, Spain
Title: ‘How can microfluidics tools help during the self-assembly and engineering of supramolecular systems and crystals?’
J. Puigmartí-Luis (Invited by Prof. Eliseo Ruíz)

128) **2025 IEEE International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale**

(IEEE-3M-NANO 2025)

(28 July - 1 August 2025) Changchun, China

Title: 'Microfluidic technologies in the ChemInFlow group?'

J. Puigmartí-Luis (Invited by Prof. Zuobin Wang)

129) 2025 Annual Nanotechnology Conference, 9th International Conference on Functional Nanomaterials and Nanodevices – NANOMAT2025

(2 - 5 September 2025) Zagreb, Croatia

Title: 'Revolutionizing materials engineering and processing with microfluidic tools'

J. Puigmartí-Luis (Invited by Dr. Polina Mladenova)

130) 3rd International Conference Advanced Mechanics: Structure, Materials, Tribology

(22 - 26 September 2025) Samarkand, Uzbekistan

Title: 'Unlocking Materials Innovation with Microfluidic Technologies'

J. Puigmartí-Luis (Invited by Dr. Ing. Jasminka Starcevic and Elbek Ismoilov)

131) Baltic Conference Series

(13 - 15 October 2025) Stockholm, Sweden

Title: 'How can microfluidic tools help during the self-assembly and engineering of supramolecular systems and crystals?'

J. Puigmartí-Luis (Invited by Dr. Anshuman Mishra)

Award-winning from the International Association of Advanced Materials: Prof. Josep Puigmartí-Luis has been honored with the prestigious **Advanced Materials Award – 2025** for their notable and outstanding research contribution in the field of Advanced Materials Science & Technology and delivered a lecture 'Microfluidics Engineering'

132) Global Partner Week of BIT

(20 - 25 October 2025) Beijing, China

Title: 'Unlocking materials innovation with microfluidic technologies'

J. Puigmartí-Luis (Invited by Ms. ZONG Xin (Summer), Manager, Division of International Partnership Extension, Office of International Affairs, Beijing Institute of Technology)

133) JiNaN University

(8 - 21 November 2025) Guangzhou, China

Title: 'Unlocking materials innovation with microfluidic technologies'

J. Puigmartí-Luis (Invited by Prof. Qiao Tang)

134) 2025 MRS Fall Meeting & Exhibit

(30 November- 5 December 2025) Boston, USA

Title: 'Integrating Porous Framework Materials into Magnetic Microrobots'

J. Puigmartí-Luis (Invited by Prof. Abdon Pena)

135) N.I.C.E. INTERNATIONAL RENDEZ-VOUS - Nature Inspires Creativity Engineers

(9 - 11 December 2025) Nice, France

Title: 'Low Grashof microfluidics: an advanced tool for chemistry and materials synthesis'

J. Puigmartí-Luis (Keynote speaker, Invited by Prof. Frédéric Guittard)

14. MAJOR COLLABORATIONS

<i>Group</i>	<i>Institution and/or University</i>	<i>Topic of collaboration</i>
Prof. Dr. Salvador Pané	ETH Zürich, Switzerland	Microfabrication and processes engineering
Dr. Tiago Sotto Mayor	University of Porto, Portugal	Numerical simulations
Prof. Dr. Andrew deMello	ETH Zürich, Switzerland	Microfabrication / Clean room work

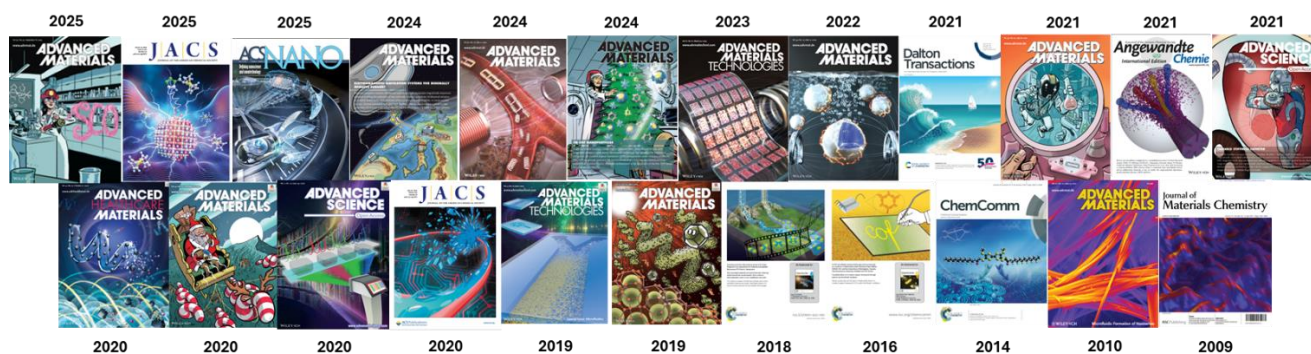
15. PUBLICATION LIST

Contributions: 153; 131 articles, 14 proceedings, 5 book chapters; 2 patents

Citations: > 7000 (Google Scholar)

H-index: 46 (Google Scholar) / 44 (Web of Science)

I have been working as an independent researcher since 2009, when I was appointed an ETH research fellow. I was awarded the ETH fellowship to develop my own research combining microfluidic technologies with chemistry and materials science.



In the publications in which my name is in bold, I was the lead author, and/or introduced the concepts of the study and supervised the research; before being the PI of the group. Entries marked with a star mean that I am also the corresponding author.

15.a. PEER-REVIEWED ARTICLES

- 1) 'Noncovalent Control for Bottom-Up Assembly of Functional Supramolecular Wires'
J. Puigmartí-Luis, A. Minoia, H. Uji-I, C. Rovira, J. Cornil, S. De Feyter, R. Lazzaroni, D. B. Amabilino
J. Am. Chem. Soc. **2006**, 128, 12602-12603.
Science Highlight, Science-AAAS Editors' Choice 22, September 2006; 313 (5794).
- 2) 'Chemical and Constitutional Influences in the Self-Assembly of Functional Supramolecular Hydrogen-bonded Nanoscopic Fibers'
J. Puigmartí-Luis, A. Minoia, Á. Pérez del Pino, G. Ujaque, C. Rovira, A. Lledòs, R. Lazzaroni, D. B. Amabilino
Chem. Eur. J. **2006**, 12, 9161-9175. **VIP Paper**
- 3) 'Supramolecular conducting nanowires from organogels'
J. Puigmartí-Luis, V. Laukhin, Á. Pérez del Pino, J. Vidal-Gancedo, C. Rovira, E. Laukhina, D. B. Amabilino
Angew. Chem. Inter. Ed. **2007**, 46, 238-241.
- 4) 'Bottom-up assembly of high density molecular nanowire cross junctions at a solid/liquid interface'
S. Lei, **J. Puigmartí-Luis**, A. Minoia, M. Van der Auweraer, C. Rovira, R. Lazzaroni, D. B. Amabilino, S. De Feyter
Chem. Comm. **2008**, 703-705.
- 5) 'Assembly of Functional Molecular Nanostructures on Surfaces'
E. Gomar-Nadal, **J. Puigmartí-Luis**, D. B. Amabilino
Chem. Soc. Rev. **2008**, 37, 490-504.
- 6) 'Monolayer self-assembly at liquid-solid interfaces: Chirality and electronic properties of molecules at surfaces'
D. B. Amabilino, S. De Feyter, R. Lazzaroni, E. Gomar, J. Veciana, C. Rovira, M. M. Abdel-Mottaleb, W. Mamdouh, P. Iavicoli, K. Psychogiopoulou, M. Linares, A. Minoia, H. Xu, **J. Puigmartí-Luis**
J. Phys. Cond. Mat. **2008**, 20, 184003703.
- 7) 'Shaping Supramolecular Nanofibers with Nanoparticles forming complementary Hydrogen Bonds'
J. Puigmartí-Luis, Á. Pérez del Pino, E. Laukhina, J. Esquena, V. Laukhin, C. Rovira, J. Vidal-Gancedo, A. Kanaras, R. J. Nichols, M. Brust, D. B. Amabilino
Angew. Chem. Inter. Ed. **2008**, 47, 1861-1866.
- 8) 'TTF-based bent-core liquid crystals'
I. C. Pintre, J. L. Serrano, M. Blanca Ros, J. Ortega, I. Alonso, J. Martínez-Perdiguero, C. L. Folcia, J. Etxebarria, F. Goc, D. B. Amabilino, **J. Puigmartí-Luis**, E. Gomar-Nadal
Chem. Comm. **2008**, 2523-2525.
- 9) 'Layer-By-Layer Electropeeling of Organic Conducting Material Imaged In Real Time'
C. Munuera, **J. Puigmartí-Luis**, M. Paradinas, L. Garzon, D. B. Amabilino, C. Ocal
Small **2009**, 5, 214-220.
- 10) 'Rich Phase Behavior in a Supramolecular Conducting Material Derived from an Organogelator'
J. Puigmartí-Luis, E. Laukhina, V. N. Laukhin, A. Perez del Pino, N. Mestres, J. Vidal-Gancedo, C. Rovira, D. B. Amabilino
Adv. Funct. Mater. **2009**, 19, 934-941.

- 11) 'Supramolecular electroactive organogel and conducting nanofibers with C-3-symmetrical architectures'
I. Danila, F. Riobé, **J. Puigmartí-Luis**, A. Pérez del Pino, J. D. Wallis, D. B. Amabilino, N. Avarvari
J. Mat. Chem. **2009**, *26*, 4495-4504. **Cover of the Journal**
- 12) 'Solvent effect on the morphology and function of novel gel-derived molecular materials'
J. Puigmartí-Luis, A. Pérez del Pino, V. Laukhin, L. N. Feldborg, C. Rovira, E. Laukhina, D. B. Amabilino
J. Mater. Chem. **2010**, *20*, 466-474.
- 13) 'Use of unnatural β -peptides as a self-assembling component in functional organic fibres'
E. Torres, **J. Puigmartí-Luis**, Á. Pérez del Pino, R. M. Ortuño, D. B. Amabilino
Org. Biomol. Chem. **2010**, *8*, 1661-1665.
- 14) 'Gels as a soft matter route to conducting nanostructured organic and composite materials'
D. B. Amabilino, **J. Puigmartí-Luis**
Soft Matter **2010**, *6*, 1605-1612.
- 15) 'A Microfluidic Approach for the Formation of Conductive Nanowires and Hollow Hybrid Structures'
J. Puigmartí-Luis*, D. Schaffhauser, B. R. Burg, P. S. Dittrich
Adv. Mater., **2010**, *22*, 2255-2259. **Cover of the Journal**
- 16) 'Anisotropy in structural and physical properties in tetrathiafulvalene derivatives-based zone-cast layers as seen by Raman spectroscopy, UV-visible spectroscopy, and field effect measurements'
S. Kotarba, J. Jung, A. Kowalska, T. Marszalek, M. Kozanecki, P. Miskiewicz, M. Mas-Torrent, C. Rovira, J. Veciana, **J. Puigmartí-Luis**, J. Ulanski
J. Appl. Phys. **2010**, *108*, 014504.
- 17) 'High-density micro-arrays for mass spectrometry'
P. L. Urban, K. Jefimovs, A. Amantonico, S. R. Fagerer, T. Schmid, S. Mädler, **J. Puigmartí-Luis**, N. Goedecke, R. Zenobi
Lab Chip **2010**, *10*, 3206-3209.
- 18) 'Controlling the length and location of in-situ formed nanowires by means of microfluidic tools'
P. Kuhn, **J. Puigmartí-Luis**, I. Imaz, D. Maspoch, P. S. Dittrich
Lab Chip **2011**, *11*, 753-757.
- 19) 'Gene Delivery with Bisphosphonate-stabilized Calcium Phosphate Nanoparticles'
E. V. Giger, **J. Puigmartí-Luis**, R. Schlatter, S. Proulx, B. Castagner, M. Detmar, P. S. Dittrich, J.-Christophe Leroux
J. Control. Release. **2011**, *150*, 87-93.
- 20) 'Guided assembly of metal and hybrid conductive probes using floating potential dielectrophoresis'
J. Puigmartí-Luis*, J. Stadler, D. Schaffhauser, Á. Pérez del Pino, B. R. Burg, P. S. Dittrich,
Nanoscale **2011**, *3*, 937-940.
- 21) 'Nanocomposites combining conducting and superparamagnetic components prepared via an organogel'
E. Taboada, L. N. Feldborg, A. Pérez del Pino, A. Roig, D. B. Amabilino, **J. Puigmartí-Luis***
Soft Matter **2011**, *7*, 2755-2761.
- 22) 'Coordination Polymer Nanofibers Generated by Microfluidic Synthesis'
J. Puigmartí-Luis, M. Rubio-Martínez, U. Hartfelder, I. Imaz, D. Maspoch, P. S. Dittrich
J. Am. Chem. Soc. **2011**, *133*, 4216-4219.
- 23) 'Hierarchical chiral expression from the nano- to meso-scale in synthetic supramolecular helical fibers of a non-amphiphilic C3-symmetrical π -functional molecule'
I. Danila, F. Riobé, F. Piron, **J. Puigmartí-Luis**, J. D. Wallis, M. Linares, H. Ågren, D. Beljonne, D. B. Amabilino, N. Avarvari
J. Am. Chem. Soc. **2011**, *133*, 8344-8353.
- 24) 'Self-assembly of supramolecular wires and cross-junctions and efficient electron tunnelling across them'
J. Puigmartí-Luis*, A. Minoia, S. Lei, V. Geskin, B. Li, R. Lazzaroni, S. De Feyter, D. B. Amabilino
Chem. Sci. **2011**, 1945-1951.
- 25) 'Twists and turns in the hierarchical self-assembly pathways of a non-amphiphilic chiral supramolecular material'
I. Danila, F. Pop, C. Escudero, L. N. Feldborg, **J. Puigmartí-Luis**, F. Riobé, N. Avarvari, D. B. Amabilino

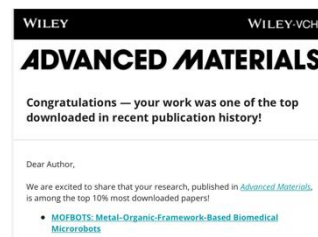
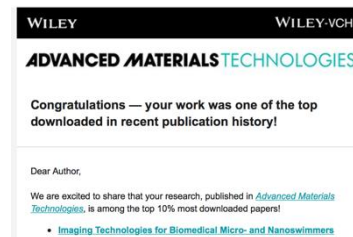
Chem. Commun. **2012**, 48, 4552-4554.

- 26) 'Confined synthesis and integration of functional materials in sub-nanoliter volumes'
B. Z. Cvetković, **J. Puigmartí-Luis**, D. Schaffhauser, T. Ryll, S. Schmid, P. S. Dittrich
ACS Nano **2013**, 7, 183-190.
- 27) 'Dual-template' synthesis of one-dimensional conductive nanoparticle superstructures from coordination metal-Peptide polymer crystals'
M. Rubio-Martínez, **J. Puigmartí-Luis**, I. Imaz, P. S. Dittrich, D. Maspoch
Small, **2013**, 9, 4160-4167.
- 28) 'Bottom-up assembly of a surface-anchored supramolecular rotor enabled using a mixed self-assembled monolayer and pre-complexed components'
J. Puigmartí-Luis, W. J. Saletta, A. González, D. B. Amabilino, Ll. Pérez-García
Chem. Commun., **2014**, 50, 82-84.
- 29) 'Microfluidic platforms; a mainstream technology for the preparation of crystals'
J. Puigmartí-Luis*
Chem. Soc. Rev. **2014**, 43, 2253-2271
Invited article, Paper Highlighted in "Highlights from the Flow Chemistry Literature 2014" by Toma N. Glasnov
(<https://link.springer.com/content/pdf/10.1556/JFC-D-14-00010.pdf>)
- 30) 'Localized, Stepwise Template Growth of Functional Nanowires from an Amino Acid-Supported Framework in a Microfluidic Chip'
J. Puigmartí-Luis*, M. Rubio-Martínez, I. Imaz, B. Cvetkovic, Ll. Abad, A. Perez del Pino, D. Maspoch, D. B. Amabilino,
ACS Nano, **2014**, 8, 818-826.
Paper Highlighted in ICN2 (<http://www.icn.cat/en/news/2654-new-method-for-the-controlled-growth-of-functional-nanowires>)
- 31) 'Highly Conductive Single-Molecule Wires with Controlled Orientation by Coordination of Metalloporphyrins'
A. C. Aragonès, N. Darwish, W. J. Saletta, Ll. Pérez-García, F. Sanz, **J. Puigmartí-Luis***, D. B. Amabilino, I. Díez-Pérez
Nano Lett., **2014**, 14, 4751-4756.
- 32) 'Hierarchical growth of curved organic nanowires upon evaporation induced self-assembly'
B. Li, **J. Puigmartí-Luis**, A. M. Jonas, D. B. Amabilino, S. De Feyter
Chem. Comm. **2014**, 50, 13216-13219. **Cover of the Journal**
- 33) 'The electrochemical manipulation of apolar solvent drops in aqueous electrolytes by altering the surface polarity of polypyrrole architectures'
G. Chatzipirpiridis, A. Sanoria, O. Ergeneman, J. Sort, **J. Puigmartí-Luis**, B. J. Nelson, E. Pellicer, S. Pané
Electrochem. Commun. **2015**, 54, 32-35.
- 34) 'Bottom-up on-crystal in-chip formation of a conducting salt and a view of its restructuring: From organic insulator to conducting 'switch' through microfluidic manipulation'
J. Puigmartí-Luis*, M. Paradinas, E. Bailo, R. Rodríguez-Trujillo, R. Pfattner, C. Ocal, D. B. Amabilino
Chem. Sci. **2015**, 6, 3471-3477.
- 35) 'Laser-induced chemical transformation of graphene oxide-iron oxide nanoparticles composites deposited on polymer substrates'
A. Pérez del Pino, E. György, C. Logofatu, **J. Puigmartí-Luis**, Wei Gao
Carbon **2015**, 93, 373-383.
- 36) 'Tunable release of hydrophilic compounds from hydrophobic nanostructured fibers prepared by emulsion electrospinning'
G. Yazgan, A. M. Popa, R. M. Rossi, K. Maniura, **J. Puigmartí-Luis**, D. Crespy, G. Fortunato
Polymer, **2015**, 66, 268-276.
- 37) 'Coordination-directed self-assembly of a simple benzothiadiazole-fused tetrathiafulvalene to low-bandgap metallogels'
A. M. Amacher, **J. Puigmartí-Luis**, V. Lebedev, V. Laukhin, D. Amabilino, S. Decurtins, Shi-Xia Liu
Chem. Comm. **2015**, 51, 15063-15066.

- 38) 'Microfluidic pneumatic cages: a novel approach for in-chip crystal trapping, manipulation and controlled chemical treatment'
A. Abrishamkar, M. Paradinas, E. Bailo, R. Rodríguez-Trujillo, R. Pfattner, R. M. Rossi, C. Ocal, A. J. deMello, D. B. Amabilino, J. Puigmartí-Luis*
JoVE, **2016**, 138, 6920-6923. **Invited article**
- 39) 'Milliseconds make the difference in the far-from-equilibrium self-assembly of supramolecular chiral nanostructures'
A. Sorrenti, R. Rodríguez, D. B. Amabilino, J. Puigmartí-Luis*
J. Am. Chem. Soc., **2016**, 138, 6920-6923.
- 40) 'Freezing the Nonclassical Crystal Growth of a Coordination Polymer Using Controlled Dynamic Gradients'
M. Rubio-Martínez, I. Imaz, N. Domingo, A. Abrishamkar, T. Sotto Mayor, R. Rossi, C. Carbonell, A. J. deMello, D. B. Amabilino, D. MasPOCH, J. Puigmartí-Luis*
Adv. Mater., **2016**, 28, 8150-8155.
- 41) 'Functional supramolecular tetrathiafulvalene-based films with mixed valences states'
M. Riba-Moliner, A. Gómez-Rodríguez, D. B. Amabilino, J. Puigmartí-Luis, A. González-Campo
Polymer, **2016**, 103, 251-260.
- 42) 'Crystalline Fibres of a Covalent Organic Framework through bottom-up Microfluidic Synthesis'
D. Rodríguez-San-Miguel, A. Abrishamkar, J. A. R. Navarro, R. Rodríguez-Trujillo, D. B. Amabilino, R. Mas-Ballesté, F. Zamora, J. Puigmartí-Luis*
Chem. Commun., **2016**, 52, 9212-9215.
Paper Highlighted in ChemistryWorld and in SiNC
(<https://www.chemistryworld.com/news/drawing-designer-cofs/1010136.article>)
(in<http://www.agenciasinc.es/Noticias/Nuevo-metodo-para-crear-hilos-de-polimeros-organicos>)
Outside back-cover of the journal
- 43) 'Microfluidic-based synthesis of covalent organic frameworks (COFs): a tool for continuous production of COF fibers and direct printing on a surface'
A. Abrishamkar, D. Rodríguez-San-Miguel, J. A. R. Navarro, R. Rodríguez-Trujillo, D. B. Amabilino, R. Mas-Ballesté, F. Zamora, A. deMello, J. Puigmartí-Luis*
JoVE, **2017**, doi: 10.3791/56020. **Invited article**
- 44) 'Spatiotemporally Controlled Electrodeposition of Magnetically Driven Micromachines Based on the Inverse Opal Architecture'
Ch. Hu, F. Aeschlimann, G. Chatzipirpiridis, J. Pokki, X. Chen, J. Puigmartí-Luis, B. J. Nelson, S. Pané
Electrochem. Commun. **2017**, 81, 97-101.
- 45) 'Drug-Loaded Supramolecular Gels Prepared in a Microfluidic Platform: Distinctive Rheology and Delivery through Controlled Far-from-Equilibrium Mixing'
G. Sathyanarayanan, M. Rodrigues, D. Limón, R. Rodríguez-Trujillo, J. Puigmartí-Luis, Ll. Pérez-García, D. B. Amabilino
ACS Omega, **2017**, 2, 8849-8858.
- 46) 'Mobile magnetic nanocatalysts for bioorthogonal targeted cancer therapy'
M. Hoop, A. S. Ribeiro, D. Rösch, P. Weinand, N. Mendes, F. Mushtaq, X-Z. Chen, C. Franco Pujante, J. Puigmartí-Luis, J. Paredes, B. J. Nelson, A. Paula Pêgo, S. Pané
Adv. Funct. Mater., **2018**, DOI: 10.1002/adfm.201705920.
- 47) 'Biocompatibility characteristics of the metal organic framework ZIF-8 for therapeutical applications'
M. Hoop, C. F. Walde, R. Riccò, A. Terzopoulou, F. Mushtaq, X-Z. Chen, A. J. deMello, P. Falcato, B. J. Nelson, J. Puigmartí-Luis*, S. Pané
Applied Materials Today, **2018**, 11, 13-21.
- 48) 'Synthesis of graphene-based photocatalysts for water splitting by laser-induced doping with ionic liquids'
A. Pérez del Pino, A. González, S. Giraldo, J. Peral, E. György, C. Logofatu, A. J. deMello, J. Puigmartí-Luis*
Carbon, **2018**, 130, 48-58.
- 49) 'Self-assembled materials and supramolecular chemistry within microfluidic conditions: from common thermodynamic states to non-equilibrium structures'
S. Sevim, A. Sorrenti, C. Franco, S. Furukawa, S. Pané, A. J. deMello, J. Puigmartí-Luis*

Chem. Soc. Rev., **2018**, 47, 3788-3803. **Outside back-cover of the journal**

- 50) 'Imaging Technologies for Biomedical Micro- and Nano-swimmers'
S. Pané, J. Puigmartí-Luis*, C. Bergeles, X.-Z. Chen, E. Pellicer, J. Sort, A. Ferreira, B. J. Nelson
Adv. Mater. Technol. **2019**, 4, 1800575.
This article is part of the **special series on Advanced Intelligent Systems** that showcases the outstanding achievements of leading international researchers on intelligent systems.
Top downloaded in recent publication history of Adv. Mater. Technologies!
- 51) 'Continuous versus segmented-flow microfluidic synthesis in materials science'
M. Gonidec, J. Puigmartí-Luis*
Crystals, **2019**, 9, 12 (doi:10.3390/cryst9010012). **Feature paper**
- 52) 'In-flow MOF lithography'
S. Sevim, C. Franco, H. Liu, H. Roussel, L. Rapenne, S. Pané, D. Muñoz-Rojas, A. J. deMello, J. Puigmartí-Luis*
Adv. Mater. Technol. **2019**, 1800666.
- 53) 'Fabrication of arbitrary three-dimensional suspended hollow microstructures in transparent fused silica glass'
F. Kotz, P. Risch, K. Arnold, S. Sevim, J. Puigmartí-Luis, A. Quick, M. Thiel, A. Hrynevich, P. D. Dalton, D. Helmer, B. E. Rapp
Nat. Commun. **2019**, 10, 1439.
- 54) 'Magnetically Driven Piezoelectric Soft Microswimmers for Neuron-like Cell Delivery and Neuronal Differentiation'
X.-Z. Chen, J.-H. Liu, M. Dong, L. Müller, G. Chatzipirpiridis, Ch. Hu, A. Terzopoulou, H. Torlakcik, X. Wang, F. Mushtaq, J. Puigmartí-Luis, Q.-D. Shen, B. J. Nelson, S. Pané
Mater Horiz. **2019**, DOI: 10.1039/c9mh00279k.
- 55) 'MOFBOTS: Metal–Organic Framework-based Biomedical Microrobots'
X. Wang, X.-Z. Chen, C. C.J. Alcântara, S. Sevim, M. Hoop, A. Terzopoulou, C. de Marco, Ch. Hu, A. J. deMello, P. Falcato, S. Furukawa, B. J. Nelson, J. Puigmartí-Luis*, S. Pané
Adv. Mater. **2019**, 1901592.
Paper Highlighted in: C&EN | Chemistry news from around the world
(<https://cen.acs.org/materials/metal-organic-frameworks/MOFBOTS-carry-drugs-specific-targets/97/web/2019/05>), and also in **Nanowerk**
(<https://www.nanowerk.com/spotlight/spotid=52828.php>)
Front cover of the journal
This work was one of the top downloaded in recent publication history of Advanced Materials!
- 56) 'Mineralization-inspired synthesis of magnetic zeolitic imidazole framework composites'
A. Terzopoulou, M. Hoop, X.-Z. Chen, A. M. Hirt, M. Charilaou, Y. Shen, F. Mushtaq, A. Pérez del Pino, C. Logofatu, L. Simonelli, A. J. deMello, C. J. Doonan, B. J. Nelson, S. Pané, J. Puigmartí-Luis*
Angew. Chem. Inter. Ed. **2019**, 58, 13550-13555.
- 57) 'Biomimetic Synthesis of Sub-20 nm Covalent Organic Frameworks in Water'
C. Franco, D. Rodríguez-San-Miguel, A. Sorrenti, S. Sevim, R. Pons, A. E. Platero-Prats, M. Pavlovic, I. Szilágyi, M. L. Ruiz Gonzalez, I. Imaz, M. Cano, D. Maspoch, S. Pane, A. J. deMello, F. Zamora, J. Puigmartí-Luis*
J. Am. Chem. Soc. **2020**, 142, 3540-3547.
- 58) '3D-Printed Soft Magnetoelectric Microswimmers for Delivery and Differentiation of Neuron-Like Cells'
M. Dong, X. Wang, X.-Z. Chen, F. Mushtaq, S. Deng, C. Zhu, H. Torlakcik, A. Terzopoulou, X.-H. Qin, X. Xiao, J. Puigmartí-Luis, H. Choi, Q.-D. Shen, B. J. Nelson, S. Pané
Adv. Funct. Mater., **2020**, 30, 1910323.
- 59) 'Exploiting Electrolyte Confinement Effects for the Electrosynthesis of Two-Engine Micromachines'
M. Fernández-Barcia, B. Jang, Carlos C. J. Alcântara, U. Wolff, A. Gebert, M. Uhlemann, X. Chen, J. Puigmartí-Luis, J. Sort, E. Pellicer, S. Pané,
App. Mater. Today **2020**, 19, 100629.
- 60) 'Growing and shaping metal-organic framework single crystals at the millimetre scale'



A. Sorrenti, L. Jones, S. Sevim, X. Cao, A. J. deMello, C. Martí-Gastaldo, J. Puigmartí-Luis*
J. Am. Chem. Soc. **2020**, 142, 20, 9372-9381. **Cover of the Journal**

- 61) 'SERS Barcode Libraries: A Microfluidic Approach'
S. Sevim, A. Sorrenti, S. Pané, A. J. deMello, J. Puigmartí-Luis*
Adv. Sci. **2020**, 1903172. **Cover of the Journal**
- 62) 'Green Synthesis of Imine-based Covalent Organic Frameworks in Water'
J. Á. Martín-Illán, D. Rodríguez-San-Miguel, C. Franco, I. Imaz, D. Maspoch, J. Puigmartí-Luis*, Félix Zamora
Chem. Commun., **2020**, 56, 6704-6707.
- 63) 'Pathway selection as a tool for crystal defect engineering: A case study with a functional coordination polymer'
A. Abrishamkar, S. Suárez-García, S. Sevim, Sh-X. Liu, S. Decurtins, G. Aromí, D. Aguilà, S. Pané, A. J. deMello, A. Rotaru, D. Ruiz-Molina, J. Puigmartí-Luis*
App. Mater. Today **2020**, 20, 100632.
- 64) 'Microfluidic-Assisted Blade Coating of Compositional Libraries for Combinatorial Applications: The Case of Organic Photovoltaics'
X. Rodríguez-Martínez, S. Sevim, X. Xu, C. Franco, P. Pamies-Puig, L. Córcoles-Guija, R. Rodríguez-Trujillo, F. Javier del Campo, D. Rodríguez-San-Miguel, A. deMello, S. Pané, D. B. Amabilino, O. Inganäs, J. Puigmartí-Luis*
Mariano Campoy-Quiles
Adv. Energy Mater. **2020**, 2001308.
- 65) 'Tuning Single-Molecule Conductance in Metalloporphyrin-based Wires via Supramolecular Interactions'
A. C. Aragonès, A. Martín-Rodríguez, D. Aravena, J. Puigmartí-Luis, D. B. Amabilino, N. Aliaga-Alcalde, A. Gonzalez Campos, E. Ruiz, I. Díez-Pérez,
Angew. Chem. Inter. Ed. **2020**, 59, 19193–19201.
- 66) 'Advanced technologies for the fabrication of MOF thin films'
C. Crivello, S. Sevim, O. Graniel, C. Franco, S. Pané, J. Puigmartí-Luis, D. Muñoz-Rojas
Mater. Horiz. **2021**, 8, 168-178.
- 67) 'Biodegradable Metal–Organic Framework-Based Microrobots (MOFBOTs)'
A. Terzopoulou, X. Wang, X-Zh. Chen, M. Palacios-Corella, C. Pujante, J. Herrero-Martín, Dr. X-H. Qin, J. Sort, A. J. deMello, B. J. Nelson, J. Puigmartí-Luis*, Salvador Pané
Adv. Healthcare Mater. **2020**, 9, 2001031. **Cover of the Journal**
- 68) 'Metal-Organic Frameworks in Motion'
A. Terzopoulou, J. D. Nicholas, X-Zh. Chen, B. J. Nelson, S. Pané, J. Puigmartí-Luis*
Chem. Rev. **2020**, 120, 11175–11193.
- 69) 'CANDYBOTS: A New Generation of 3D-Printed Sugar-Based Transient Small-Scale Robots'
S. Gervasoni, A. Terzopoulou, C. Franco, A. Veciana, N. Pedrini, J. T. Burri, C. de Marco, E. C. Siringil, X-Z. Chen, B. J. Nelson, J. Puigmartí-Luis*, Salvador Pané
Adv. Mater. **2020**, 2005652. **Front Cover and research highlighted at IQTC**
<https://www.iqtc.ub.edu/research/highlights/2020/candybots-a-new-generation-of-3d%E2%80%90printed-sugar%E2%80%90based-transient-small%E2%80%90scale-robots-2/>
- 70) 'An interdisciplinary and application-oriented approach to teach microfluidics'
M. Mehdi Salek, V. Fernandez, G. D'souza, J. Puigmartí-Luis, R. Stocker, E. Secchi
Biomicrofluidics. **2021**, 15, 014104.
- 71) 'Helical Klinotactic Locomotion of Two-Link Nanoswimmers with Dual-Function Drug-Loaded Soft Polysaccharide Hinges'
J. Wu, B. Jang, Yuval Harduf, Z. Chapnik, Ö. Bartu Avci, X. Chen, J. Puigmartí-Luis, O. Ergeneman, B. J. Nelson, Y. Or, S. Pané
Adv. Sci. **2021**, 8, 8, 2004458.
- 72) 'Liquid atomic layer deposition as an emergent technology for the fabrication of thin film'
O. Graniel, J. Puigmartí-Luis*, D. Muñoz-Rojas
Dalton Trans. **2021**, 50, 6373. **Front cover of the Journal**

- 73) 'Exploiting reaction-diffusion conditions to trigger pathway complexity in the growth of a MOF'
N. Calvo Galve, A. Abrishamkar, A. Sorrenti, L. Di Rienzo, M. Satta, M. D'Abramo, E. Coronado, A. J. deMello, G. Mínguez Espallargas, J. Puigmartí-Luis*
Angew. Chem. Int. Ed., **2021**, 60, 15920. **Hot Paper and Inside Cover**
- 74) 'Synthesis of 2D Porous Crystalline Materials in Simulated Microgravity'
N. Contreras-Pereda, D. Rodríguez-San-Miguel, C. Franco, S. Sevim, J. Pedro Vale, E. Solano, W-K. Fong, A. Del Giudice, L. Galantini, R. Pfattner, S. Pané, T. Sotto Mayor, D. Ruiz-Molina, J. Puigmartí-Luis*
Adv. Mater., **2021**, 33, 30, 2101777. **Front cover of the Journal**
Highlighted: <https://phys.org/news/2021-07-simulated-microgravity-materials.html>; **No funciona dóna error**
<https://www.azom.com/news.aspx?newsID=56574>; <https://www.eurekalert.org/news-releases/929058>
- 75) 'Magnetoelectric coupling in micropatterned BaTiO₃/CoFe₂O₄ epitaxial thin film structures: Augmentation and site-dependency'
D. Kim, M. D. Rossell, M. Campanini, R. Erni, J. Puigmartí-Luis, X. Chen, S. Pané
Appl. Phys. Lett., **2021**, 119, 1, 012901.
- 76) 'Piezoelectric Nanomaterials Activated by Ultrasound: The Pathway from Discovery to Future Clinical Adoption'
A. Cafarelli, A. Marino, L. Vannozzi, J. Puigmartí-Luis, S. Pané, G. Ciofani, L. Ricotti
ACS Nano, **2021**, 15, 7, 11066–11086.
- 77) 'A Submillimeter Continuous Variable Stiffness Catheter for Compliance Control'
J. Lussi, M. Mattmann, S. Sevim, F. Grigis, C. De Marco, C. Chautems, S. Pané, J. Puigmartí-Luis, Q. Boehler, B. J. Nelson
Adv. Sci., **2021**, 8, 18, 2101290. **Inside Cover and Highlighted in PhysicsWorld:**
<https://physicsworld.com/a/variable-stiffness-catheter-could-increase-the-safety-of-robotic-eye-surgery/>
- 78) 'Biodegradable Small-Scale Swimmers for Biomedical Applications'
J. Llacer-Wintle, A. Rivas-Dapena, X-Z. Chen, E. Pellicer, B. J. Nelson, J. Puigmartí-Luis, S. Pané
Adv. Mater., **2021**, 33, 42, 2102049.
- 79) 'Powering and Fabrication of Small-Scale Robotics System'
S. Pané, P. Wendel-Garcia, Y. Belce, X-Z. Chen, J. Puigmartí-Luis
Curr. Robot. Rep., **2021**, 2, 427 – 440. (<https://doi.org/10.1007/s43154-021-00066-1>)
- 80) 'Room-Temperature Spin-Dependent Transport in Metalloporphyrin-Based Supramolecular Wires'
A. C Aragonès, A. Martín-Rodríguez, D. Aravena, G. di Palma, W. Qian, J. Puigmartí-Luis, N. Aliaga-Alcalde, A. González-Campo, I. Díez-Pérez, E. Ruiz
Angew. Chem., **2021**, 133, 49, 26162–26169. **Hot Paper**
- 81) 'Biotemplating of Metal–Organic Framework Nanocrystals for Applications in Small-Scale Robotics'
A. Terzopoulou, M. Palacios-Corella, C. Franco, S. Sevim, T. Dysli, F. Mushtaq, M. Romero-Angel, C. Martí-Gastaldo, D. Gong, J. Cai, X-Z. Chen, M. Pumera, A. J. DeMello, B. J. Nelson, S. Pané, J. Puigmartí-Luis*
Adv. Funct. Mater., **2021**, 32, 13, 210742.
- 82) 'In flow-based technologies: a new paradigm for the synthesis and processing of covalent-organic frameworks'
P. Martínez-Bulit, A. Sorrenti, D. Rodríguez-San-Miguel, M. Mattera, Y. Belce, Y. Xia, S. Ma, M-H. Huang, S. Pané, J. Puigmartí-Luis*
Chem. Eng. J. **2022**, 435, 135117.
- 83) 'Conductive properties of triphenylene MOFs and COFs'
N. Contreras-Pereda, S. Pané, J. Puigmartí-Luis, D. Ruiz-Molina,
Coord. Chem. Rev. **2022**, 460, 214459.
- 84) 'Magnetoelectric Effect in Hydrogen Harvesting: Magnetic Field as a Trigger of Catalytic Reactions'
D. Kim, Ch. Gattinoni, H. Torlakcik, I. Efe, A. Terzopoulou, A. Veciana Picazo, E. Siringil, F. Mushtaq, C. Franco, J. Puigmartí-Luis, B. Nelson, N. Spaldin, X. Chen, S. Pané,
Adv. Mater., **2022**, 34, 2110612. **Front cover of the Journal**
- 85) 'Chirality transfer from a 3D macro shape to the molecular level by controlling asymmetric secondary flows'
S. Sevim, A. Sorrenti, J. Pedro Vale, Z. El-Hachemi, S. Pané, A. D. Flouris, T. Sotto Mayor, J. Puigmartí-Luis*,
Nat. Commun. **2022**, 13, 1766.
- 86) 'Enhanced Piezocatalytic Performance of BaTiO₃ Nanosheets with Highly Exposed {001} Facets'

- Q. Tang, J. Wu, D. Kim, C. Franco, A. Terzopoulou, A. Veciana, J. Puigmartí-Luis, X.-Z. Chen, B. J. Nelson, S. Pané
Adv. Funct. Mater., **2022**, 32, 2202180.
- 87) 'MoSBOTs: Magnetically Driven Biotemplated MoS₂-Based Microrobots for Biomedical Applications'
V. Asunción-Nadal, C. Franco, A. Veciana, S. Ning, A. Terzopoulou, S. Sevim, X.-Zh. Chen, D. Gong, J. Cai, P. D. Wendel-Garcia, B. Jurado-Sánchez, A. Escarpa, J. Puigmartí-Luis, S. Pané
Small, **2022**, 18, 2203821.
- 88) 'Motion Analysis and Real-Time Trajectory Prediction of Magnetically Steerable Catalytic Janus Micromotors'
J. Wu, D. Folio, J. Zhu, B. Jang, X. Chen, J. Feng, P. Gambardella, J. Sort, J. Puigmartí-Luis, O. Ergeneman, A. Ferreira, S. Pané
Adv. Intell. Syst. **2022**, 2200192.
- 89) 'Covalent transfer of chemical gradients onto a graphenic surface with 2D and 3D control'
Y. Xia, S. Sevim, J. Pedro Vale, J. Seibel, D. Rodríguez-San-Miguel, D. Kim, S. Pané, T. Sotto Mayor, S. De Feyter, J. Puigmartí-Luis*
Nat. Commun., **2022**, 13, 7006. **Highlighted**
- 90) 'Flexible fluorescent metal-organic frameworks towards highly stable optical fibers and biocompatible cell platforms'
Y. Yin, H. Chen, P. Lin, W. Yu, X. Cao, X. Sheng, J. Puigmartí-Luis*
Science China Materials, **2023**, 66, 1659-1669.
- 91) 'Tuning oxygen vacancies in Bi₄Ti₃O₁₂ nanosheets to boost piezo-photocatalytic activity'
Q. Tang, J. Wu, X.-Zh. Chen, R. Sanchis-Gual, A. Veciana, C. Franco, D. Kim, I. Surin, J. Pérez-Ramírez, M. Mattera, A. Terzopoulou, N. Qin, M. Vukomanovic, B. J. Nelson, J. Puigmartí-Luis, S. Pané
Nano Energy, **2023**, 108, 108202.
- 92) 'Shape-memory effect in twisted ferroic nanocomposites'
D. Kim, M. Kim, S. Reidt, H. Han, A. Baghizadeh, P. Zeng, H. Choi, J. Puigmartí-Luis, M. Trassin, B. J. Nelson, X.-Zh. Chen, S. Pané
Nat. Commun. **2023**, 14, 750.
- 93) 'Strain sensitive flexible magnetoelectric ceramic nanocomposites'
M. Kim, D. Kim, B. Aktas, H. Choi, J. Puigmartí-Luis, B. J. Nelson, X.-Zh. Chen, S. Pané
Adv. Mater. Tech., **2023**, 8, 6, 2202097. **Front Cover of the Journal**
- 94) '3D Printed Template-Assisted Casting of Biocompatible Polyvinyl Alcohol-Based Soft Microswimmers with Tunable Stability'
R. Sanchis-Gual, H. Ye, T. Ueno, F. C. Landers, L. Hertle, S. Deng, A. Veciana, Y. Xia, C. Franco, H. Choi, J. Puigmartí-Luis, B. J. Nelson, X.-Zh. Chen, S. Pané
Adv. Funct. Mater., **2023**, 33, 39, 2212952.
- 95) 'The magnetopyroelectric effect: heat-mediated magnetoelectricity in magnetic nanoparticle-ferroelectric polymer composites'
J. Llacer-Wintle, J. Renz, L. Hertle, A. Veciana, D. von Arx, J. Wu, P. Bruna, M. Vukomanovic, J. Puigmartí-Luis, B. J. Nelson, X.-Zhong Chen, S. Vidal Pane
Mater. Horiz. **2023**, 10, 2627-2637.
- 96) 'Filler-Enhanced Piezoelectricity of Poly-L-Lactide and Its Use as a Functional Ultrasound-Activated Biomaterial'
M. Vukomanović, L. Gazvoda, M. Kurtjak, M. Maček-Kržmanc, M. Spreitzer, Q. Tang, J. Wu, H. Ye, X. Chen, M. Mattera, J. Puigmartí-Luis, S. Vidal Pane
Small, **2023**, 19, 35, 2301981.
- 97) 'Can We Rationally Design and Operate Spatial Atomic Layer Deposition Systems for Steering the Growth Regime of Thin Films?'
J. Pedro Vale, A. Sekkat, T. Gheorghin, S. Sevim, E. Mavromanolaki, A. D. Flouris, S. Pané, D. Muñoz-Rojas, J. Puigmartí-Luis*, Tiago Sotto Mayor*
J. Phys. Chem. C, **2023**, 127, 9425–9436.
- 98) 'Catalytically Propelled Micro- and Nanoswimmers'
B. Jang, M. Ye, A. Hong, X. Wang, X. Liu, D. Bae, J. Puigmartí-Luis, S. Vidal Pane

Small Sci. **2023**, 3, 2300076.

- 99) 'Magnetic PiezoBOTs: a microrobotic approach for targeted amyloid protein dissociation'
S. Ning, R. Sanchis-Gual, C. Franco, P. D. Wendel-Garcia, H. Ye, A. Veciana, Q. Tang, S. Sevim, L. Hertle, J. Llacer-Wintle, X-H. Qin, C. Zhu, J. Cai, X. Chen, B. J. Nelson, J. Puigmartí-Luis*, S. Pané
Nanoscale, **2023**, 15, 14800-14808.
- 100) '3D Motion Manipulation for Micro- and Nanomachines: Progress and Future Directions'
H. Huang, Sh. Yang, Y. Ying, X. Chen, J. Puigmartí-Luis*, L. Zhang, S. Vidal Pane
Adv. Mater. **2023**, 36, 1, 2305925.
- 101) 'On-Command Disassembly of Microrobotic Superstructures for Transport and Delivery of Magnetic Micromachines'
F. C. Landers, V. Gantenbein, L. Hertle, A. Veciana, J. Llacer-Wintle, X-Zh. Chen, H. Ye, C. Franco, J. Puigmartí-Luis*, M. Kim, B. J. Nelson, S. Vidal Pane
Adv. Mater., **2023**, 36, 18, 2310084. **Front Cover**
- 102) "On-the-fly" synthesis of self-supported LDH hollow structures through controlled microfluidic reaction-diffusion conditions'
M. Mattera, A. Sorrenti, L. De Gregorio Perpiñá, V. Oestreicher, S. Sevim, X-Zh. Chen, S. Pané, G. Abellán, J. Puigmartí-Luis*
Small, **2023**, 2307621.
- 103) '3D Printing of Covalent Organic Frameworks: A Microfluidic-Based System to Manufacture Binder-Free Macroscopic Monoliths'
S. Royuela, S. Sevim, G. Hernanz, D. Rodríguez-San-Miguel, C. Franco, S. Pané, J. Puigmartí-Luis*, F. Zamora
Adv. Funct. Mater., **2023**, 34, 17, 2314634.
- 104) 'Tailored design of a water-based nanoreactor technology for producing processable sub-40 nm 3D COF nanoparticles at atmospheric conditions'
A. Veciana Author, G. Llauredó-Capdevila, A. Mayoral, R. Pons, D. Rodríguez-San-Miguel, L. Hertle, H. Ye, M. Mao, S. Sevim, A. Sorrenti, B. Jang, Z. Wang, X-Zh. Chen, B. J. Nelson, R. Matheu, C. Franco, S. Pané, J. Puigmartí-Luis*
Adv. Mater. **2023**, 36, 14, 2306345. **Front cover of the Journal**
- 105) 'Large-scale and rapid processing of 3D COFs via 3D controlled reaction-diffusion zones'
M. Mattera, A. Tuan Ngo, J. Pedro Valeb, C. Franco, S. Sevim, M. Guix, R. Matheu, T. Sotto Mayor, S. Pané, J. Puigmartí-Luis*
Chem. Mater., **2024**, 36, 2, 959–967.
- 106) 'Electrostatic Catalysis of a Click Reaction in a Microfluidic Cell'
S. Sevim, C. Franco, A. C Aragonès, N. Darwish, D. Kim, R. Anna Picca, B. J Nelson, S. Pané, I. Díez-Pérez, J. Puigmartí-Luis*
Nat. Commun., **2024**, 15, 790. **Highlighted**
- 107) 'A Human-Scale Clinically-Ready Electromagnetic Navigation System for Magnetically-Responsive Biomaterials and Medical Devices'
S. Gervasoni, N. Pedrini, T. Rifai, C. Fischer, F. C. Landers, M. Mattmann, R. Dreyfus, S. Viviani, A. Veciana, E. Masina, B. Aktas, J. Puigmartí-Luis, C. Chautems, S. Pané, Q. Boehler, P. Gruber, B. J. Nelson
Adv. Mater., **2024**, 36, 31, 2310701. **Front cover of the Journal**
- 108) 'A Simple In Situ Marker Guiding Shape-Controlled Synthesis of Iron Oxide Nanoparticles'
J. Llacer-Wintle, L. Hertle, S. Ziegler, E. Pellicer, A. G. Roca, J. Nogués, J. Puigmartí-Luis, B. J. Nelson, X.-Z. Chen, S. Pané
Adv. Funct. Mater., **2024**, 34, 41, 2404113.
- 109) 'A Naturally Inspired Extrusion-based Microfluidic Approach for Manufacturing Tailorable Magnetic Soft Continuum Microrobotic Devices'
L. Hertle, S. Sevim, J. Zhu, V. Pustovalov, A. Veciana, J. Llacer-Wintle, F. C. Landers, H. Ye, X-Z. Chen, H. Vogler, U. Grossniklaus, J. Puigmartí-Luis, B. J. Nelson, S. Pané
Adv. Mater., **2024**, 36, 31, 2402309.
- 110) 'Enhancing Sensitivity across Scales with Highly Sensitive Hall Effect-Based Auxetic Tactile Sensors'

Y. Yun, D. Lee, S. Lee, S. Pané, J. Puigmartí-Luis, S. Chun, B. Jang
Adv. Intell. Syst., **2024**, 7, 3, 2400337.

- 111) 'Single-Step Synthesis of Sub-10 nm Magnetic Nanoparticles with High Saturation Magnetization and Broad pH Stability'
V. Pustovalov, F.C. Landers, L. Hertle, H. Ko, J. Llacer-Wintle, H. Ye, A. Veciana, C. Franco, R. Sanchis-Gual, X-Z. Chen, E. Pellicer, J. Puigmartí-Luis, B. J. Nelson, S. Pané
Adv. Eng. Mater., **2024**, 26, 20, 2400307.
- 112) 'Magnetically Guided Microcatheter for Targeted Injection of Magnetic Particle Swarms'
L. H. Torlakcik, S. Sevim, P. Alves, M. Mattmann, J. Llacer-Wintle, M. Pinto, R. Moreira, A. D. Flouris, F. C. Landers, X-Z. Chen, J. Puigmartí-Luis, Q. Boehler, T. Sotto Mayor, M. Kim, B. J. Nelson, S. Pané
Adv. Sci., **2024**, 11, 38, 2404061.
- 113) 'Breaking the Perfluorooctane Sulfonate Chain: Piezocatalytic Decomposition of PFOS Using BaTiO₃ Nanoparticles'
L. A. Veciana, S. Steiner, Q. Tang, V. Pustovalov, J. Llacer-Wintle, J. Wu, X-Z. Chen, T. Manyiwa, V. U. Ultra Jr., B. Garcia-Cirera, J. Puigmartí-Luis, C. Franco, D. J. Janssen, L. Nyström, S. Boulos, S. Pané
Small Science, **2024**, 4,12, 2400337.
- 114) 'Revolutionizing Tetracycline Hydrochloride Remediation: 3D Motile Light-Driven MOFs Based Micromotors in Harsh Saline Environments'
Y. Zhao, J. Lin, Q. Wu, Y. Ying, J. Puigmartí-Luis*, S. Pané, S. Wang
Adv. Sci., **2024**, 11,40, 2406381.
- 115) 'Insights into the Biological Activity and Bio-Interaction Properties of Nanoscale Imine-Based 2D and 3D Covalent Organic Frameworks'
H. Ye, C. Franco, M. A. Aboouf, M. Thiersch, S. Sevim, J. Llacer-Wintle, A. Veciana, G. Llauredó-Capdevila, K. Wang, X-Z. Chen, Q. Tang, R. Matheu, P.D. Wendel-Garcia, P. A. Sánchez-Murcia, B. J. Nelson, C. Luo, J. Puigmartí-Luis*, S. Pané
Adv. Sci., **2024**, 11, 44, 2407391.
- 116) 'Shape-Morphing in Oxide Ceramic Kirigami Nanomembranes'
M. Kim, D. Kim, M. Mirjolet, N. A. Shepelin, T. Lippert, H. Choi, J. Puigmartí-Luis, B. J. Nelson, X-Z. Chen, S. Pané
Adv. Mater., **2024**, 36, 47, 2404825.
- 117) 'Targeted Drug Delivery: From Chemistry to Robotics at Small Scales'
M. Kim, J. D. Nicholas, J. Puigmartí-Luis, B. J. Nelson, S. Pané
Annu. Rev. Control Robot. Auton. Syst., **2025**, 8, 379-405.
- 118) 'Cooperative Multiscale-Assembly for Directional and Hierarchical Growth of Highly Oriented Porous Organic Cage Single-Crystal Microtubes and Arrays'
S-H. Liu, K. Zhao, J-H. Zhou, K. Dong, H. Ai, P. Liu, J-W. Cui, Y-H. Zhang, J. Puigmartí-Luis, J-K. Sun
Angew. Chem. Int. Ed., **2025**, 64, 11, e202421523.
- 119) 'Unveiling the Origin of the Scale-Dependent Conductivity of Ni₃(HITP)₂ Metal–Organic Framework Thin Films'
E. Osuna, P. Ares, J. Gómez-Herrero, G. Llauredó-Capdevila, D. Rodríguez-San-Miguel, S. Pané, J. Puigmartí-Luis, C. Gómez-Navarro
Small, **2025**, 21, 8, 2407945.
- 120) 'Piezoelectrostatic Catalysis of the Azide–Alkyne Huisgen Cycloaddition'
Q. Tang, R. Sanchis-Gual, N. Qin, H. Ye, S. Sevim, A. Veciana, K. Thodkar, J. Wu, B. J. Nelson, I. Díez-Pérez, X-Z. Chen, C. Gattinoni, J. Puigmartí-Luis*, S. Pané, C. Franco
J. Am. Chem. Soc., **2025**, 147, 10, 8049-9000. **Cover of the Journal**
- 121) 'A Covalently Bonded Exchange Coupled Nanomagnet-Based Hydrogel Composite for Microrobotic Applications'
L. Hertle, H. Ko, V. Gantenbein, J. Llacer-Wintle, H. Ye, M. Mirjolet, A. Veciana, F. C. Landers, M. Kim, E. Zhang, M. Hu, J. Puigmartí-Luis*, M. Estrader, X-Z. Chen, B. J. Nelson, S. Pané
Adv. Intell. Syst., **2025**, 7, 7, 2400752.
- 122) 'On-the-Fly Synthesis of Freestanding Spin-Crossover Architectures With Tunable Magnetic Properties'

- A. T. Ngo, D. Aguilà, J. P. Vale, S. Sevim, M. Mattera, J. Díaz-Marcos, R. Pons, G. Aromí, B. Jang, S. Pané, T. Sotto Mayor, M. Palacios-Corella, J. Puigmartí-Luis*
Adv. Mater., **2025**, Early View, 2420492. **Back cover of the Journal** <https://doi.org/10.1002/adma.202420492>
- 123) **'Analysis of the Navigation of Magnetic Microrobots through Cerebral Bifurcations for Targeted Drug Delivery'**
P. G. Alves, M. Pinto, R. Moreira, D. Sivakumaran, F. Landers, M. Guix, B. J. Nelson, A. D. Flouris, S. Pané, J. Puigmartí-Luis*, T. S. Mayor
Adv. Intell. Syst., **2025**, Early View, 2400993. <https://doi.org/10.1002/aisy.202400993>
- 124) **'Technology Roadmap of Micro/Nanorobots'**
X. Ju, C. Chen, C. M. Oral, S. Sevim, R. Golestanian, M. Sun, N. Bouzari, X. Lin, M. Urso, J. S. Nam, Y. Cho, X. Peng, F. C. Landers, S. Yang, A. Adibi, N. Taz, R. Wittkowski, D. Ahmed, W. Wang, V. Magdanz, M. Medina-Sánchez, M. Guix, N. Bari, B. Behkam, R. Kapral, Y. Huang, J. Tang, B. Wang, K. Morozov, A. Leshansky, S. A. Abbasi, H. Choi, S. Ghosh, B. Borges Fernandes, G. Battaglia, P. Fischer, A. Ghosh, B. Jurado Sánchez, A. Escarpa, Q. Martinet, J. Palacci, E. Lauga, J. Moran, M. A. Ramos-Docampo, B. Städler, R. S. Herrera Restrepo, G. Yossifon, J. D. Nicholas, J. Ignés-Mullol, J. Puigmartí-Luis, Y. Liu, L. D. Zarzar, C. W. Shields IV, L. Li, S. Li, X. Ma, D. H. Gracias, O. Velev, S. Sánchez, M. J. Esplandiú, J. Simmchen, A. Lobosco, S. Misra, Z. Wu, J. Li, A. Kuhn, A. Nourhani, T. Maric, Z. Xiong, A. Aghakhani, Y. Mei, Y. Tu, F. Peng, E. Diller, M. S. Sakar, A. Sen, J. Law, Y. Sun, A. Pena-Francesch, K. Villa, H. Li, D. E. Fan, K. Liang, T. J. Huang, X-Z. Chen, S. Tang, X. Zhang, J. Cui, H. Wang, W. Gao, V. Kumar Bandari, O. G. Schmidt, X. Wu, J. Guan, M. Sitti, B. J. Nelson, S. Pané, L. Zhang, H. Shahsavan, Q. He, I-D. Kim, J. Wang, M. Pumera
ACS Nano, **2025**, 19, 24174–24334. **Cover of the Journal**
- 125) **'Insights into ultrasound-enhanced methyl orange decolorization using transition metal dichalcogenides nanoflowers'**
A. Veciana, J. Wu, N. Qin, J. Llacer-Wintle, M. Mao, D. F. Abbott, V. Mougél, K. Thodkar, J. Liu, C. Franco, J. Puigmartí-Luis, S. Pané, X-Z. Chen
Sep. Purif. Technol., **2025**, 377, Part 3, 134390.
- 126) **'Strategies for Navigating Magnetic Microrobots in Neurovascular Networks: A Numerical Analysis'**
P. G. Alves, M. Pinto, R. Moreira, D. Sivakumaran, F. Landers, M. Guix, B. J. Nelson, A. D. Flouris, S. Pané, J. Puigmartí-Luis*, T. S. Mayor
Small Science, **2025**, Early View 2500180.
- 127) **'Sustained, Reversible, and Adaptive non-equilibrium Steady States of a Dissipative DNA-Based System'**
J. D. Nicholas, E. Del Grosso, A. J. deMello, J. Puigmartí-Luis*, F. Ricci, A. Sorrenti
Angew. Chem. Int. Ed., **2025**, 64, e202512967
- 128) **'Kelvin Probe Force Microscopy in Bionanotechnology: Current Advances and Future Perspectives'**
E. Rahimi*, M. Palacios-Corella, A. Mol, S. Pané, J. Puigmartí-Luis*
Adv. Mater. **2025**, e10671
- 129) **'Shaping Magnetic Hyperthermia Properties through Nanoparticle Surface-Ligand Design: Implications for Cellular Responses'**
L. Hertle, A. López-Ortega, H. Ye, A. Martínez-Jiménez de Allo, E. Garaio, V. Gantenbein, J. Llacer-Wintle, I. Paul, S. Nigg, J. Puigmartí-Luis, M. Estrader, X-Z. Chen, B. J. Nelson, S. Pané
Small, **2025**, Early view, e07665
- 130) **'Clinically Ready Magnetic Microrobots for Targeted Therapies'**
F. C. Landers, L. Hertle, V. Pustovalov, D. Sivakumaran, C. M. Oral, O. Brinkmann, K. Meiners, P. Theiler, V. Gantenbein, A. Veciana, M. Mattmann, S. Riss, S. Gervasoni, C. Chautems, H. Ye, S. Sevim, A. D. Flouris, J. Puigmartí-Luis, T. Sotto Mayor, P. Alves, T. Lühmann, X. Chen, N. Ochsenbein, U. Moehrlen, T. Schubert, Z. Kulcsar, P. Gruber, M. Weisskopf, Q. Boehler, S. Pané, B. J. Nelson
Science, **2025**, 390, 6774, 710-715.
- 131) **'Reconfigurable Magnetic Soft Microrobot for Acoustically Triggered Targeted Bacterial Sterilization'**
Q. Gao, F. Li, J. Gao, E. Zhang, Y. Su, N. Qin, H. Ye, J. Puigmartí, G. Cantarella, S. Schuerle, J. Wu, B. J. Nelson, S. Pané
Adv. Funct. Mater., **2025**, e18017.
- 132) **'COFs on MOFs: Layer-by-Layer Synthesis of MOF@ COF Nanoparticles with Synergistic Adsorption'**
A. Guillem-Navajas, L. Torrico-García-Viso, J. A. Suárez del Pino, N. Aramburu-Merino, P. Segovia, E. G. Michel, J. Puigmartí-Luis, E. Velasco, P. Tarazona, D. MasPOCH, D. Rodríguez-San-Miguel, F. Zamora
Adv. Mater., **2025**, Early View, e14548.

- 133) 'A Soft, Flexible Implant for Wireless Photothermal–Pyroelectric Neurostimulation'
J. Wu, M. Mao, B. Garcia-Cirera, H. Ye, X. Chen, J. Puigmartí-Luis*, N. Qin, S. Pané
Adv. Sci., **2026**, Early View, e19616.

15.b. PROCEEDINGS

- 1) 'Microfluidic-guided assembling of nanoparticles, nanorods and nanowires'
J. Puigmartí-Luis*, P. S. Dittrich
Proc. of the μ TAS conference **2009**, 213-215.
- 2) 'Towards nanowire sensors on a microfluidic platform: In-situ formation, positioning and sizing of nanowire bundles'
P. Kuhn, J. Puigmartí-Luis, I. Imaz, D. Maspoch, P. S. Dittrich,
European Cells and Materials **2010**, 20, 58.
- 3) 'Formation of metal-bioorganic nanofibres on a microchip'
U. Hartfelder, J. Puigmartí-Luis, I. Imaz, D. Maspoch, P. S. Dittrich,
European Cells and Materials **2010**, 20, 103.
- 4) 'Simultaneous control of lenght and location of metal organic nanowires grown by hydrodynamic focussing in a multilayer microfluidic device'
P. Kuhn, J. Puigmartí-Luis, P. S. Dittrich
Proc. of the μ TAS conference **2010**, 1883-1885.
- 5) 'Guided assembly of nanowires and their integration in microfluidic device'
J. Puigmartí-Luis*, P. Kuhn, B. Z. Cvetkovic, D. Schaffhauser, M. Rubio-Martinez, I. Imaz, D. Maspoch, P. S. Dittrich
Mater. Res. Soc. Symp. Proc. **2011**, 1346, 32-37.
- 6) 'Microreactor array for localized synthesis of functional materials in picoliter volumes'
B. Z. Cvetkovic, J. Puigmartí-Luis, P. S. Dittrich
Proc. of the μ TAS conference **2011**, 1792-1794.
- 7) 'Controlled release of active agents from electrospun fibers'
G. Yazgan, R. M. Rossi, K. Maniura, J. Puigmartí-Luis, G. Fortunato
Fiber Society's Spring 2015 Conference **2015**.
- 8) 'Microfluidic technologies: a new hope for crystal engineering'
J. Puigmartí-Luis*
Panuropeannetworks, **2016**, 21, 82-83. **Invited article**
- 9) 'Synthesis of crystalline materials using microfluidic devices: from isolation of out-of-equilibrium crystal structures to direct printing of conformal fibres of crystalline materials on surfaces'
A. Abrishamkar, R. Mas-Ballesté, A. J. deMello, J. Puigmartí-Luis*
Proc. of the μ TAS conference **2017**, 22-26.
- 10) 'Soft-hard magnetically driven microrobotic devices'
F. Landers, C.J. Alcantara, J. Puigmartí-Luis, B.J. Nelson, S. Pané
Public Health Toxicology, **2021**.
- 11) 'Magnetic small-scale robots: Principles, applications and challenges'
S. Pané, J. Puigmartí-Luis, M. Pinto, A.D. Flouris, T.S. Mayor, T.C. Lühmann, D. Sargent, B. Nelson
Public Health Toxicology, **2021**.
- 12) 'In flow controlled synthesis of blood clots'
R. S. Herrera-Restrepo, P. Martinez-Bulit, A. D. Flouris, M. Pinto, R. Moreira, E. Mavromanolaki, T. S. Mayor, S. Pané, J. Ignés, J. Puigmartí-Luis*
Public Health Toxicology, **2021**.
- 13) 'Microfluidic technologies for chemistry, materials science and biotechnology'
J. Puigmartí-Luis*

Public Health Toxicology, **2021**.

- 14) 'How can microfluidics tools help during the self-assembly and engineering of supramolecular systems and crystals?'
J. Puigmartí-Luis*
247th ECS Meeting, Montréal, Canada, **2025**.

15.c. CONTRIBUTION TO BOOKS

- 1) 'Functional molecular gels'
J. Puigmartí-Luis, D. B. Amabilino
Ed. B. Escuder and J. F. Miravet
The Royal Society of Chemistry (RSC) 2014, 195-254
Functional Molecular Gels, **2013**, 195-254.
- 2) 'Assembling supramolecular rotors on surfaces under ambient conditions'
J. Puigmartí-Luis, W. J. Saletta, A. González, L.I. Pérez-García, D. B. Amabilino
Ed. Joachim, Christian
Springer Series 'Advances in Atom and Single Molecule Machines' 2014
Single Molecular Machines and Motors, **2014**, 127-141.
- 3) 'Magnetically and Chemically Propelled Nanowire-Based Swimmers'
J. Puigmartí-Luis, E. Pellicer, B. Jang, G. Chatzipirpiridis, S. Sevim, X.-Z. Chen, B. J. Nelson, S. Pané.
In Magnetic Nano- and Microwires (Second Edition); Vázquez, M., Ed.; Woodhead Publishing Series in Electronic and Optical Materials
Magnetic Nano- and Microwires, **2020**, 777–799.
- 4) 'Curvilinear Magnetic Architectures for Biomedical Engineering'
L. Baraban, T. Huang, X. Chen, R. S. Herrera Restrepo, J. Ignés Mullol, J. Puigmartí-Luis, S. Pané.
In Curvilinear Micromagnetism From fundamentals to Applications; Denys Makarov, Denis D. Sheka, Springer Cham;
Curvilinear Magnetic Shells, **2022**, 305-341.
- 5) 'Chapter Ten - Role and impact of glass in chemistry, flow chemistry, and microfluidic technologies'
S. Sevim, A. Sorrenti, O. Graniel, D. Muñoz-Rojas, S. Pané, J. Puigmartí-Luis.
Additive Manufacturing of Glass from Science to Application, *Additive Manufacturing Materials and Technologies*,
2025, 259-276

15.d. PATENT

- 1) 'Microfluidic platform with hydraulic actuation'
J. Puigmartí-Luis*, D. B. Amabilino
EP201430116 (**2014**).
- 2) 'Nanoreactors for the synthesis of porous crystalline materials'
J. Puigmartí-Luis*, F. Zamora, C. Franco, Rodríguez-San-Miguel, A. Sorrenti
US Patent App. 17/255,121, **2021**
And EU patent: EP3810320 B1, **2023**
P177107EP00 (**2018**). *Out of this patent we created a spinoff company, Porous Inks Technologies. BeAble Capital invested in this new technology.*