Ramón A. Alvarez-Puebla, PhD
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ResearcherID: *F-5053-2014*

Academic/professional activities

Date	Title	Place
21/10/12-…	ICREA Professor	ICREA, Barcelona, Spain Departamento de Quimica Fisica e Inorganica, Universitat Rovira i Virgili, Tarragona, Spain
21/12/07-20/10/12	Ramon y Cajal Research Scientist/ Associate Professor	Departamento de Quimica Fisica, Universidade de Vigo, Vigo, Pontevedra, Spain
01/02/06-30/11/07	Research Officer	National Institute for Nanotechnology-National Research Council of Canada, Edmonton, AB, Canada
01/01/05-31/01/06	Research Associate	Materials & Surface Science Group. Faculty of Science. University of Windsor, ON, Canada General Motors R&D and Planning Center, Warren, Mi, USA
01/03/04-31/12/04	Postdoctoral Fellow	Materials & Surface Science Group. Faculty of Science. University of Windsor, ON, Canada General Motors R&D and Planning Center, Warren, Mi, USA
15/07/03-31/02/04	Postdoctoral Fellow	Department of Applied Chemistry. Universidad Pública de Navarra, Pamplona, Navarra, Spain
01/01/01-03/07/03	Graduate Student	Department of Applied Chemistry. Universidad Pública de Navarra, Pamplona, Navarra, Spain (PhD Advisor JJ Garrido)

Distinctions

- ISI Essential Science Indicators since 2012 (Chemistry)
- Scientific Board, Fundacion Mari Paz Jimenez (http://fundacionmaripazjimenez.org/)
- Scientific Board, Photonics Based Sensing ERA-NET (https://photonicsensing.eu/category/news/)
- Associate Editor, Theranostics (IF: 8.9, http://www.thno.org/)
- Associate Editor, Frontiers in Materials (IF: 2.7, https://www.frontiersin.org/journals/materials#)
- Editorial Advisory Board, Analysis & Sensing (Wiley-VCH,)
- Guest Editor, Journal of Optics (Special issue on surface-enhanced Raman spectroscopy, Journal of Optics Volume 17, Number 11, November 2015, https://iopscience.iop.org/issue/2040-8986/17/11)
- Guest Editor, Applied Materials Today (Special issue on Plasmonics, https://www.sciencedirect.com/journal/applied-materials-today/special-issue/10ZM3LC1KXF) 2018-2019
- Guest Editor, Nanoscale (Themed Issue on Advances in Plasmonics and Its Applications) 2020-2021
- Co-founder of Medcom Advance SA (51% acquired by Grifols SA in 2018 for 9.800.000 €)
- ICREA Research Professor (Catalan Institution for Research and Advanced Studies, ICREA) Government of Catalonia, Spain
- Scientific Board, National Postdoctoral Grant Commission (Ministry of Science and Education, Spain)
- Acreditation Catedratico de Universidad (National Agency for Accreditation and Quality Evaluation, Spain, ANECA)
- Acreditation Profesor Titular de Universidad (ANECA)
- Acreditation Profesor Contratado Doctor (ANECA)
- Acreditation Profesor de Universidad Privada (ANECA)
- Acreditation Profesor Ayudante Doctor (ANECA)
- Acreditation I3 (Programa de Incentivación de la Incorporación e Intensificación de la Actividad Investigadora, Ministry of Science and Education, Spain)

Visiting Appointments

- Invited Professor, Universite Paris-Descartes, France, 2017
- Invited Professor, Nanyang Technical University, Singapore, 2015
- Invited Professor, Philipps-Universität Marburg, Marburg, Germany, 2012
- Invited Professor, Universität Bayreuth, Bayreuth, Germany, 2011

Funding and Grants (45)

Principal Investigator

31- Programa de suport als grups de recerca reconeguts 2018. *Universitat Rovira i Virgili* **(2017PFR-URV-B2-02)** 2018 **(**14,782.65 **€)**

30- Surface-enhanced Raman scattering (SERS) profiling of RNA from tumor educated platelets *Martí i Franquès COFUND fellowship programme* **(2018MFP-COFUND-18)** 2018-2021 **(101.700 €)**

29- Reference Group in Cataluña *Agencia de Gestión de Ayudas Universitarias y de Investigación (AGAUR)* **(2017 SGR 883)** 2017-2019 **(15,000 €)**

28- Materiales opticos funcionales para la monitorizacion y tratamiento de infecciones en protesis e implantes *Ministerio de Economia y Competitividad* **(CTQ2017-88648-R)** 2018-2020 **(141,570 €)**

27- Programa de suport als grups de recerca reconeguts 2017. *Universitat Rovira i Virgili* **(2017PFR-URV-B2-02)** 2018 **(**13,992.84 **€)**

26- Matriz de sensores ópticos con reactividad cruzada para la detección masiva y el diagnóstico oncológico temprano a través de exhalaciones en oncología de precisión. *Universitat Rovira i Virgili-Banco Santander* **(2017EXIT-08)** 2018 **(5,400 €)**

25- Fabrication of an Optical Device for the Fast, ultrasensitive and Multiple quantification of bacteria in biofluids (OPTOBAC). *European Union- TECNIOSPRING* **(TECSPR16-1-0025)** 2017-2019 **(105,928 €)**

24- SERS-based sensor for detection of low levels of Oncogenic proteins in biological samples (SERSProteinTrack). *European Union*-VINNMER Marie Curie Academy Outgoing **(Vinnmer-2016-02082)** 2016-2018 **(**184,288.28 **€)**

23- Plasmonic nanoprobes to detect disease biomarkers *European Union-TECNIOSPRING* **(TECSPR15-1-0045)** 2016-2017 **(130,160 €)**

22- Methodology for the recognition and biodetection of new pathogen agents with optical methods: The example of Kawasaki disease *Ministerio de Economia y Competitividad* **(CTQ2014-59808R)** 2014-2017 **(164,860 €)**

21- Fase 3, Desenvolupament de nous sensors optics per a diagnostics i biodeteccio *Contractes gestionats per la FURV. Contractes de recerca. Contracte empresa pyme. Catalunya* **(TQC16011S)** 01/02/2016-31/01/2017 **(200,000 €)**

20- Fase 2, Desenvolupament de nous sensors optics per a diagnostics i biodeteccio *Contractes gestionats per la FURV. Contractes de recerca. Contracte empresa pyme. Catalunya* **(TQC15011S)** 01/02/2015-31/01/2016 **(200,000 €)**

19- Fase 1, Desenvolupament de nous sensors optics per a diagnostics i biodeteccio *Contractes gestionats per la FURV. Contractes de recerca. Contracte empresa pyme. Catalunya* **(TQC14011S)** 06/02/2014-05/02/2015 **(200,000 €)**

18- Reference Group at the URV (URVPFRB21401) *Agencia de Gestión de Ayudas Universitarias y de Investigación (AGAUR)* 2014-2017 **(14.000 €)**

17- Reference Group in Cataluña (2014 SGR 480) *Agencia de Gestión de Ayudas Universitarias y de Investigación (AGAUR)* 2014-2016 **(24.075 €)**

16- Intelligent materials for the detection and treatment of infectious diseases (2014 DI 055) *AGAUR* 2015-2018 **(55,600 €)**

15- Spectral thermometry for luminescent nanoparticles (2014 DI 054) *AGAUR* 2015-2018 **(55,600 €)**

14- Intracellular control of ion homeostasis (2014 DI 052) *AGAUR* 2015-2018 **(55,600 €)**

13- SERS detection of DNA lesions (2014 DI 051) *AGAUR* 2015-2018 **(55,600 €)**

12- SERS reactive strips (2013 DI 065) *AGAUR* 2014-2017 **(55,600 €)**

11- Optical intelligent materials (2013 DI 056) *AGAUR* 2014-2017 **(55,600 €)**

10- Optical materials for temperature biosensing (2013 DI 055) *AGAUR* 2014-2017 **(55,600 €)**

9- Prion detection for through organized arrays of nanorods as SERS substrates (PrioSERS) (FP7 MC-IEF-623527) *European Union (FP7-PEOPLE-2013-IEF)* 2014-2016 **(230,036 €)**

8- Self-assembly of gold nanorods for SERS substrates (TECSPR13-1-0041) *European Union-TECNIOSPRING* 2014-2015 **(125,920 €)**

7- SERS ultrasensitive universal sensing of proteins through cross-reactive sensor arrays (CrossSERS) (FP7 MC-IEF 329131) *European Union (FP7-PEOPLE-2012-IEF)* 2013-2015 **(166,336 €)**

6-Aplicaciones estratégicas de nanotecnología en agua residual *Feder-Interconecta, Ministerio de Economia y Competitividad* 2012-2014 **(1,416,023 €)**

5-Deteccion Universal de proteinas mediante sistemas de sensores ópticos de reactividad cruzada *Ministerio de Economia y Competitividad* **(CTQ2011-23167)** 2012-2014 **(141,570 €)**

4-Application of surface-enhanced spectroscopies (SERS and SEF) and composite microparticles (SiO2/nanoparticle) for diagnostics and high-throughput screening *Ministerio de Ciencia e Innovación* **(MAT2008-05755/MAT)** 2009-2011 **(72,600 €)**

3-Fabricación, optimización y aplicación de nuevos "optical enhancers" para SERS *Ministerio de Ciencia e Innovación* **(RYC-2007-00168)** 2007-2012 **(189,000 €)**

2-SERS nanobiosensors for diagnostics and biodetection *Dirección Xeral de Investigación, Desenvolvemento e Innovación (I+D+I) Xunta de Galicia* **(08TMT008314PR)** 2008-2011 **(83,950 €)**

1-Integrated Biochips for Diagnosis and Management of Human Health Transformational Technologies for Genomics Research and Pathogen Detection Genomics and Health Initiative- Program 3- National Research Council of Canada. **(CD 500,000 for NINT)** 2006-2008

Co-Investigator

14-INBIOMED-Feder (Investigación en Biomedicina). Agrupaciones Estratégicas. *Consellería de Educación e Ordenación Universitaria, Xunta de Galicia (2009/063).* 2012-2013 **(750,000 €/year)**

13-Design, synthesis and characterization of materials based in metals and oxides *Ministerio de Economia y Competitividad* **(PRI-AIBAR-2011-0771)** 2011-2013 **(9,200 €)**

12-**Contrato Programa con Grupos de Referencia** *Xunta de Galicia (2010/84)* 2010-2011 **(112,000 €)**

11-**Molecular-Level Understanding and Tailoring of Nanostructured Materials for Environmental Uses** *Ministerio de Ciencia e Innovación* **(PLE2009-0014)** 2009-2012 **(40,000 €)**

10-**INBIOMED (Investigación en Biomedicina). Agrupaciones Estratégicas.** *Consellería de Educación e Ordenación Universitaria, Xunta de Galicia (2009/063).* 2010-2011 **(750,000 €/year)**

9-Propiedades de una nanopartícula metálica individual: efectos de forma, tamaño y entorno. *Ministerio de Ciencia e Innovación* (Subprograma de acciones integradas convocatoria 2009-Francia. FR2009-0034) (**12,000 €)**

8-Nanochemistry and self-assembly routes to metamaterials for visible light. *European Union* (Collaborative Project. Small or medium-scale focused research project 228762) 2009-2012 **(3,120,000 €)**

7-INnovativE Nanostructured Optochemical Sensors European Union (Small or medium-scale focused research project. FP7-NMP-2009-EU-Russia 248236) 2009-2012 (**1,539,000 €**)

6-Raman Flow Cytometry for Diagnostics and Drug Discovery National Institutes of Health, USA (NIH EB003824, Grant: 1R01EB003824-01**)** 2004-2009 **($8 Million**)

5-Synthesis, molecular modeling, and temperature programmed spectroscopy of hydrogen storage materials. Natural Sciences and Engineering Research Council of Canada-GMC Canada. 2004-2006 **($240,000)**

4-Single molecule spectroscopy-Structure and properties of mixed organic films. Natural Sciences and Engineering Research Council of Canada. 2002-2007 **(CD 315,000)**

3-Inertización de lodos mediante procesos de estabilización con minerales de arcilla. Servicios Ecológicos de Navarra SA/Gobierno de Navarra. Consejería de Industria. 2001-2002 **(34,210 €)**

2-Complejos con tiolatos polifuncionales, preparación y estudio de sus aplicaciones Dirección General de Investigación. Ministerio de Ciencia y Tecnología **(BQU2002-04090-C02-02)** 2002-2005

1-Preparación de materiales mesoporosos como soporte de compuestos vapocrómicos en sensores de fibra óptica Gobierno de Navarra. Departamento de Educación y Cultura (**PA03038**) 2002-2005

Professional Activities

Peer Review

ACS App Mater Interface; ***ACS Nano****;* **ACS Photonics**; *ACS Omega;* ***Adv Mater****;* ***Adv Funct Mater****; Adv Opt Mater*; *Anal Chem; Anal Chim Acta; Analyst;* ***Angew Chem Int Ed****; App Spectrosc; App Phys Lett; App Surf Sci; Biomacromol; Biomaterials; Can J Anal Sci Spectrosc; Chem Asian J; Chem Comm; Chem Eur J; Chem Mater; Chem Phys Lett;* ***Chem Sci****;* ***Chem Soc Rev;*** *Chemosphere; ChemPhysChem; Colloid Surface A/B;* ***Energy Environ Sci****; Environ Sci Technol; Geochim Cosmochim Acta; IEEE Photonics J; J. Chem Phys; J Colloid Interface Sci; J. Control. Release*; *J Electroanal Chem; J Hazar Mater; J Mater Chem; J Mater Sci; J Mol Struct; J Nanobiotechnol; J Optic A; J Phys Chem A/B/C/Lett; J Raman Spectrosc;* ***JACS****; Langmuir; Mater Sci Eng B;* ***Nano Lett;*** *Nano Research; Nanoscale;* ***Nature****;* ***Nat Comm.****;* ***Nat Mater****;* ***Nat Nanotech****;* ***Nat Protocols;*** ***Nat Sci Rep****; Oncotarget; Optic Express; Org Geochem; PCCP; Physica B; React Funct Polym; RSC Advances;* ***Sci. Adv****.; Sci. Technol. Adv Mater; Small; Sensor Act A/B; Talanta;* ***Theranostics;*** *Thin Solid Films; Vib Spectrosc; Water Research.*

Congress and meeting organization

- ***BIOS+. SPIE Photonics West.*** *San Francisco, CA, USA,* 2021
- ***Plasmonic Symposium 2020***. Nanyang Technological University, Singapore, 2020
- ***BIOS+. SPIE Photonics West.*** *San Francisco, CA, USA,* 2020
- ***BIOS+. SPIE Photonics West.*** *San Francisco, CA, USA,* 2019
- ***BIOS+. SPIE Photonics West.*** *San Francisco, CA, USA,* 2018
- Applied biosensing based on functional colloids **253rd ACS National Meeting & Exposition**, San Francisco, CA, 2017
- ***BIOS+. SPIE Photonics West.*** *San Francisco, CA, USA,* 2017
- ***BIOS+. SPIE Photonics West.*** *San Francisco, CA, USA,* 2016
- ***Nanax 7.*** *Marburg, Germany,* 2016
- ***BIOS+. SPIE Photonics West.*** *San Francisco, CA, USA,* 2015
- ***International Workshop on Nanoplasmonics for Energy and the Environment.*** *Sanxenxo, Spain,* 2011

Editorial boards

- Associate Editor, ***Theranostics*** (IF: 8.9, http://www.thno.org/) 2015-...
- Associate Editor, ***Frontiers in Materials*** (IF: 2.7, https://www.frontiersin.org/journals/materials#) 2015-…
- Editorial Advisory Board, ***Analysis & Sensing*** (Wiley-VCH,) 2020-…
- Guest Editor, ***Journal of Optics*** (Special issue on surface-enhanced Raman spectroscopy, Journal of Optics Volume 17, Number 11, November 2015, https://iopscience.iop.org/issue/2040-8986/17/11) 2015
- Guest Editor, ***Applied Materials Today*** (Special issue on Plasmonics, https://www.sciencedirect.com/journal/applied-materials-today/special-issue/10ZM3LC1KXF) 2018-2019
- Guest Editor, ***Nanoscale*** (Themed Issue on Advances in Plasmonics and Its Applications) 2020-2021

Grant Review

- La Caixa Fundation
- Science Foundation Ireland (SFI)
- Project 5-100. Ministry of Education and Science of the Russian Federation
- Cancer Research UK
- ACS Petroleum Foundation
- National science Center of Poland
- Frame Program 7- European Union
- H2020- European Union
- Centro para el Desarrollo Tecnologico Industrial (CDTI), Spain
- Evaluation and Prospective National Agency (ANEP), Spain
- Nanyang Technical University, Singapore
- National Agency for the Promotion of Science and Technology (ANPCyT), Argentina

- National Commission for the Promotion of Science and Technology (CONICYT), Chile

Professional Memberships

- Society of Photo-Optical Instrumentation Engineers, SPIE
- Materials Research Society, MRS
- American Chemical Society, ACS
- Royal Society of Chemistry, RSC
- Real Sociedad Española de Física y Química. Grupos Especializado de Adsorción y de Coloides e Interfases.
- International Union of Pure and Applied Chemistry

Teaching and Mentoring

Undergraduate Level Lecture Courses

5. Advanced Physical Chemistry. Faculty of Chemistry; Universidad de Vigo. *60 hours/year*. 2010-2012
4. General Chemistry I. Faculty of Sea Sciences; Universidad de Vigo. *31 hours/year*. 2010-2011
3. Instrumental Techniques in Physical Chemistry. Faculty of Chemistry; Universidad de Vigo. *70 hours/year*. 2009-2010
2. Chemistry of Aqueous Solutions/Thermodynamics. Faculty of Sea Sciences; Universidad de Vigo. *75 hours/year*. 2008-2009
1. Documentation in Sciences. Faculty of Physics. Universidad de Vigo. *70 hours/year*. 2007-2008

Graduate Level Lecture Courses

4. Optical sensing for diagnosis. Universite Paris Descartes. 15h. Paris 2017.
3. Advances in Colloids and Interfaces. Máster universitario con mención de calidad "Ciencia y tecnología de coloides e interfases". *50 hours/year*, 2009-2012.
2. Nanoparticles. Máster universitario con mención de calidad "Ciencia y tecnología de coloides e interfases". *75 hours/year*, 2010-2012.
1. Biodetection technologies. Programa de doctorado con mención de calidad "*Ciencia y tecnología de coloides e interfases*". *20 hours/year*. Santiago de Compostela; Junio, 2009.

Research Advisees (MSc: 14/Ph.D.: 10)

Graduate (MSc/PhD) Students

- **Irene Calderon Gonzalez:** PhD (in progress)
- **Tolga Zorlu:** PhD (in progress)
- **Maria Cristina Turino:** PhD (in progress)
- **Gianfranco Terrones:** PhD (in progress)
- **Irving Brian Becerril Castro:** PhD (in progress)

Postgraduate Scholars

- **Dr Maria Blanco Formoso** (2019-…)
- **Dr Nicolas Pazos-Perez** (2013-…)
- **Dr Luca Guerrini** (2012-…)

Alumni

- **Patricia Gisbert-Quilis:** MSc (2015); PhD (2018) "Optical Detection and Structural Analysis of DNA via Direct Surface-Enhanced Raman Scattering" -summa cum laude
- **Manuel Garcia Algar**: MSc (2014); PhD (2018) *"Optical Methods and Nano/Microsystems for Cancer Diagnosis and Therapy"* -summa cum laude (best Thesis award 2019)
- **Eduardo Garcia-Rico Fernandez**: PhD (2017) *"Biopsia líquida: Aplicación de métodos ópticos y metabólicos para la detección y caracterización de ácidos nucleicos, proteínas y células en sangre periférica de pacientes con cáncer"* -summa cum laude (best Thesis award 2018)
- **Judit Morlà Folch**: MSc (2014); PhD (2017) *"Direct Label-Free Surface-Enhanced Raman Scattering Analysis of Nucleic Acids"* -summa cum laude (best Thesis award 2017)
- **Carme Catala Garcia**: PhD (2017) *"Optical Methods for ultrafast screening of microorganism"* -summa cum laude
- **Bernar Mir Simon**: PhD (2016) *"Multiplex Optical Detection System for Prosthetic Joint Infection Diagnosis"* -summa cum laude
- **Dionisia Tsoutsi**: MSc (2011); PhD (2015) *"Inorganic Ions Sensing by surface-enhanced Raman scattering spectroscopy"*-summa cum laude
- **Sara Abalde Cela**: DEA (2010); PhD (2013) *"Design and SERS applications of nanoparticle based hybrid plasmonic materials"*-summa cum laude (best Thesis award 2013)

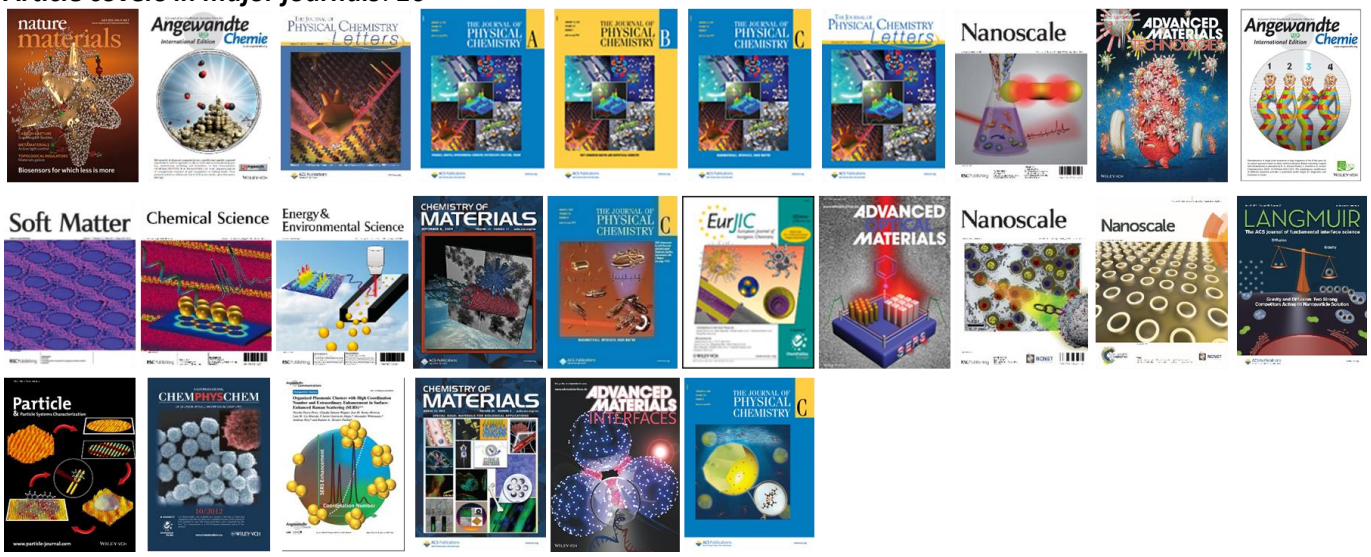
- **Laura Rodriguez Lorenzo**: DEA (2009); PhD (2012) *"Synthesis, Optical Characterization, and Sensing Applications of Gold Nanostars"*-summa cum laude (best Thesis award 2012)
- **Paula Aldeanueva Potel**: PhD (2012) *"Design of Nanostructured Materials as Substrates for SERS Detection"*-summa cum laude (best Thesis award 2012)
- **Arianna Fabris:** MSc (2020)
- **Xiaotong Feng:** MSc (2016)
- **Cristina Anaya:** MSc (2015)
- **Anna Trojanowska**: MSc (2014)
- **Ignacio Rodriguez Loureiro**: MSc (2013)
- **Elena Alfaya**: MSc (2013)
- **Silvia Fernandez Vazquez**: MSc (2011)
- **Marcos Sanles Sobrido**: DEA (2009)

- **Dr Neus Feliu Torres** (2016-2018)
- **Dr Elena Pazos** (2014/17)
- **Dr Moritz Nazarenus** (2015/17)
- **Dr Alexey Shavel** (2014/17)
- **Dr Hainan Xie** (2014/17)
- **Dr Sara Gomez de Pedro** (2014/17)
- **Dr Isabelle Rodriguez** (2014/15)
- **Dr Pilar Rivera-Gil** (2013/14)
- **Dr Laura Hernandez** (2013/14)
- **Dr Manuel Martins** (2012/14)
- **Dr Abdiaziz Farah** (2006/7)
- **Dr Sheng Dai** (2006/7)
- **Dr Herman High** (2006/7)
- **Dr Rolando Perez-Piñeiro** (2006/7)

PUBLICATIONS

Peer reviewed publications: 188
Number of citations: 13718 (2020 Citations: 1705) ***h-index:*** 65/***m-index***: 3.8
ISI highly cited/hot papers: 41
Listed at ISI Essential Science Indicators (Chemistry) since 2012
ORCID: *orcid.org/0000-0003-4770-5756*
ResearcherID: *F-5053-2014*

Article covers in major journals: 26



****Corresponding author***

189- M. Liebtrau, M. Sivis, A. Feist, H. Lourenço-Martins, N. Pazos-Pérez, **R.A. Alvarez-Puebla**, J. García de Abajo, A. Polman,* C. Ropers *Spontaneous and stimulated electron energy-gain and -loss processes in nanoscale plasmonic near fields* ***Light: Science & Applications****, (2021)*

188- T. Zorlu, L. Guerrini, **R.A. Alvarez-Puebla***,* The Sensing Applications of Metal-Organic Frameworks (MOFs) and Their Basic Features Affecting the Fate of Detection* in ***Metal-Organic Frameworks for Chemical Reactions*** *(XXXX Eds.) Elsevier (2021)* Vol. 1, Chapter 11, XXX (*https://doi.org/10.1016/B978-0-12-822099-3.00011-3*)
Invited Book Chapter

187-C. Sanchez-Cano, **R.A. Alvarez-Puebla**, J.M. Abendroth, T. Beck, Robert Blick4, Y. Cao, F. Caruso, I. Chakraborty, H. Chapman, C. Chen, B.E. Cohen, A.L.C. Conceição, D.P. Cormode, D. Cui, K.A. Dawson, G. Falkenberg, C Fan, N Feliu, M. Gao, E. Gargioni, C.-C. Glüer, F. Grüner, M. Hassan, Y. Hu, Y. Huang, S. Huber, Nils Huse, Y. Kang, A. Khademhosseini, T.F. Keller, C. Körnig, N.A. Kotov, D. Koziej, X.-J. Liang, B. Liu, S. Liu, Y. Liu, Z. Liu, L.M. Liz-Marzan, X. Ma, A. Machicote, W. Maison, A.P. Mancuso, S. Megahed, B. Nickel, F. Otto, C. Palencia-Ramirez, S. Pascarelli, A. Pearson, O. Peñate-Medina, B. Qi, J. Rädler, J.J. Richardson, A. Rosenhahn, K. Rothkamm, M. Rübhausen, M.K. Sanyal, R.E. Schaak, H.-P. Schlemmer, M. Schmidt, O. Schmutzler, T. Schotten, F. Schulz, A.K. Sood, K.M. Spiers, T. Staufer, D.M. Stemer, A. Stierle, X. Sun, G. Tsakanova, P.S. Weiss, H. Weller, F. Westermeier, M. Xu, H. Yan, Y. Zao, Y. Zeng, Y. Zhao, D. Zhu, Y. Zhu, W.J. Parak* *X-Ray-Based Techniques to Study the Nano-Bio Interface* ***ACS Nano****, (2021-accepted)*

186- A. Nenashkina, S. Koltsov, O.Y. Orlova, A.A. Nikitina, D.A. Kirilenko, D.V. Andreeva, M. Blanco-Formoso, N. Pazos-Perez, **R.A. Alvarez-Puebla,*** E.V. Skorb* *Silver melamine thin film as a flexible platform for SERS analysis* ***Nanoscale****, (2021-accepted)*

185-I. Calderon, **R.A. Alvarez-Puebla,*** N. Pazos-Perez* *Gold-spiked coating of silver particles through cold nanowelding* ***Nanoscale****, (2021-accepted)*

184- Luca Guerrini, **R.A. Alvarez-Puebla*** *SERS sensing of transition metal ions in waters* ***ACS Omega****, (2021-accepted)*

183- M. Blanco-Formoso, N. Pazos-Perez, **R.A. Alvarez-Puebla,*** *Fabrication of colloidal platforms for SERS on optically inert templates* ***Journal of Raman Spectroscopy****, (2021)* (https://doi.org/10.1002/jrs.5989)
Invited Paper "Special Issue in memory of Professor Richard P. Van Duyne"

182- I. Brian Becerril-Castro, Franklin Munoz-Munoz, Ana B. Castro-Ceseña, Ana L Gonzalez, Ramon A Alvarez-Puebla,* J.M. Romo-Herrera* *Plasmonic foam platforms for air quality monitoring* ***Nanoscale****, (2021)* (https://doi.org/10.1039/D0NR07686D)

181- J.M. Romo-Herrera,* **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán* Chapter 10: *Controlled Assembly of Plasmonic Colloidal Nanoparticle Clusters* in ***Colloidal Synthesis of Plasmonic Nanometals*** *(L.M. Liz-Marzan Eds.) Jenny Standford Publishing (2020)* Chapter 10, 321-353 (ISBN: 978-0-429-29518-8)
(https://doi.org/10.1201/9780429295188)
Invited Book Chapter

180-N. Pazos-Perez, **R.A. Álvarez-Puebla*** *Synthesis of SERS-encoded nanotags: From single nanoparticles to highly brilliant complex core-satellite structures* ***Journal of Physics*** (*2020*) 1461, 012127
(doi:10.1088/1742-6596/1461/1/012127)

179-M. Martínez-Calvo, L. Guerrini, J. Rodríguez, **R.A. Álvarez-Puebla***, J.L. Mascareñas* *Surface-Enhanced Raman Scattering Detection of Nucleic Acids Exhibiting Sterically Accessible Guanines Using Ruthenium-Polypyridyl Reagents* ***Journal of Physical Chemistry Letters*** (*2020*) 11, 7218–7223
(https://doi.org/10.1021/acs.jpclett.0c02148)

178- M. Blanco-Formoso, N. Pazos-Perez, **R.A. Alvarez-Puebla,*** *Fabrication of plasmonic supercrystals and their SERS enhancing properties* ***ACS Omega****, (2020)* 40, 25485–25492
(https://doi.org/10.1021/acsomega.0c03412)
Invited Paper

177- M. Blanco-Formoso, N. Pazos-Perez, **R.A. Alvarez-Puebla*** *Fabrication and SERS properties of complex and organized nanoparticle plasmonic clusters stable in solution* ***Nanoscale*** *(2020)* 12, 14948–14956
(https://doi.org/10.1039/D0NR04167J)

176- M. Liebel, N. Pazos-Perez, N. van Hulst,* **R.A. Alvarez-Puebla*** *Surface-Enhanced Raman Scattering Holography* ***Nature Nanotechnology*** *(2020)* 15, 1005–1011 (https://doi.org/10.1038/s41565-020-0771-9)

175- M. Blanco-Formoso, **R.A. Alvarez-Puebla*** *Cancer Diagnosis through SERS and other Related Techniques* ***International Journal of Molecular Sciences*** *(2020)* 21, 2253 (*https://doi.org/10.3390/ijms21062253*)
Invited Paper "Development of Responsive Nanoparticles for Cancer Therapy"

174- Pazos-Pérez, L. Guerrini, **R.A. Alvarez-Puebla*** *Fabrication of Hybrid Silver Microstructures from Vermiculite Templates as SERS Substrates* ***Nanomaterials*** *(2020)* 10, 481 (*https://doi.org/10.3390/nano10030481*)
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Citrate-Stabilized Small Silver Nanoparticles. ***Journal of Physical Chemistry C*** *(2020)* 124, 5, 3270-3276 *(https://doi.org/10.1021/acs.jpcc.9b10606)*
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Langmuir *(2019)* 35, 11, 4110-4116 (DOI: 10.1021/acs.langmuir.9b00234)

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Invited Review

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Invited Paper

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Invited Book Chapter

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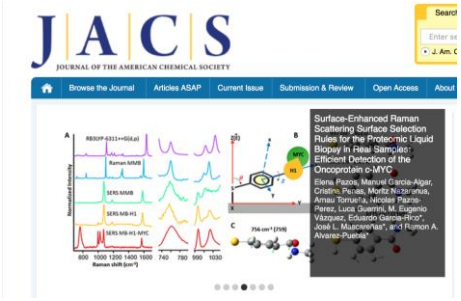

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74-R. Contreras-Cáceres, S. Abalde-Cela, P. Guardia-Girós, A. Fernández-Barbero, J. Pérez-Juste, **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán *Multifunctional Microgel Magnetic/Optical Traps for SERS Ultradetection* ***Langmuir*** *(2011)* 27, 4520–4525 (DOI: 10.1021/la200266e)

73-A. Guerrero-Martínez, **R.A. Alvarez-Puebla**, L.M. Liz-Marzán* *Nanoplasmónica Basada en Química Coloidal* ***Anales de Química*** *(2011)* 117, 221-228
Invited Paper

72-A. Schweikart, N. Pazos-Pérez, **R. Alvarez-Puebla**,* A. Fery* *Controlling inter-nanoparticle coupling by wrinkle-assisted assembly* ***Soft Matter*** *(2011)* 7, 4093-4100 (DOI: 10.1039/c0sm01359e)
Invited highlight paper
Journal Cover (May 2011 Vol. 7, Issue 9).
Between the Most-Read Articles of the year (April-June, 2011) in *Soft Matter*

71-J.M. Romo-Herrera,* **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán* *Controlled Assembly of Plasmonic Colloidal Nanoparticle Clusters* ***Nanoscale*** *(2011)* 3, 1304-1315 (DOI: 10.1039/c0nr00804d)
Invited feature paper
Journal Cover (April 2011 Vol. 3, Issue 4).
Between the Most-Read Articles of the year (January-December, 2011) in *Nanoscale*
***ISI* Highly cited (Chemistry/Physics).**
ISI* Research front at "optical antennas direct single-molecule emission; bright unidirectional fluorescence emission; optical nanoantenna; large single-molecule fluorescence enhancements produced; plasmonic colloidal nanoparticle clusters*"**

70-S. Abalde-Cela, J.M. Hermida-Ramón, P. Contreras-Carballada, L. De Cola, A. Guerrero-Martínez,* **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán *SERS Chiral Recognition and Quantification of Enantiomers through Cyclodextrin Supramolecular Complexation* ***ChemPhysChem*** *(2011)* 12, 1529-1535 (DOI: 10.1002/cphc.201000800)
Invited Paper-*"100-year commemoration of the death of Jacobus Van't Hoff"* special issue

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69-S. Abalde-Cela, B. Auguié, M. Fischlechner, W.T.S. Huck, **R.A. Alvarez-Puebla***, L.M. Liz-Marzán*, C. Abell* *Microdroplet fabrication of silver-agarose nanocomposite beads for SERS optical accumulation* ***Soft Matter*** *(2011)* 7, 1321-1325 (DOI: 10.1039/c0sm00601g)
Invited Paper

68-M. Yang, **R. Alvarez-Puebla**, H.S. Kim, P. Aldeanueva-Potel, L.M. Liz-Marzán,* N.A. Kotov* *SERS-Active Gold Lace Nanoshells with Built-in Hotspots* ***Nano Letters*** *(2010)* 10, 4013-4019 (DOI: 10.1021/nl101946c)

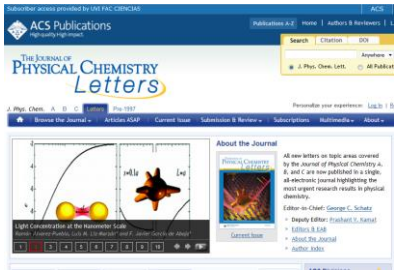
67-S. Barbosa, A. Agrawal, L. Rodríguez-Lorenzo, I. Pastoriza-Santos*, **R.A. Alvarez-Puebla**, A. Kornowski, H. Weller, L.M. Liz-Marzán* *Tuning Size and Sensing Properties in Colloidal Gold Nanostars* ***Langmuir*** *(2010)* 26, 14943-14950 (DOI: 10.1021/la102559e)
***ISI* Highly cited (Chemistry).**
ISI* Research front at "colloidal gold nanostars; gold nanostars; high-yield synthesis; synthesis; surface-enhanced Raman scattering*"**

66-R. Contreras-Cáceres, I. Pastoriza-Santos, **R.A. Alvarez-Puebla**, J. Pérez-Juste,* A. Fernández-Barbero, L.M. Liz-Marzán* *Growing Au/Ag Nanoparticles within Microgel Colloids for Improved SERS Detection* ***Chemistry: A European Journal*** *(2010)* 16, 9462-9467 (DOI: 10.1002/chem.201001261
Highlighted as *Wiley-VCH* Hot Topic

65-I. Pastoriza-Santos*, **R.A. Alvarez-Puebla**, L.M. Liz-Marzán *Synthetic routes and plasmonic properties of noble metal nanoplates* ***European Journal of Inorganic Chemistry*** *(2010)* 4288–4297 (DOI: 10.1002/ejic.201000575)

Invited Review-*"One- and Two-Dimensional Inorganic Nanomaterials"* especial issue
Journal Cover (September, 2010 Issue 27).
Between the Most-Accessed Articles in *Eur. J. Inorganic Chem.* 2011

64-R.A. Álvarez-Puebla, L. M. Liz-Marzán,* F.J. Garcia de Abajo* *Light concentration at the nanometer scale* ***Journal of Physical Chemistry Letters*** *(2010)* 1, 2428–2434 (**Invited Perspective Paper**) (DOI: 10.1021/jz100820m)



Journal Covers:

- ***J. Chem. Phys. Lett*. (August 19, 2010 Vol. 1, Issue 16).**
- ***J. Chem. Phys. A* (January 13, 2011, Vol. 115, Issue 1).**
- ***J. Chem. Phys. B* (January 13, 2011, Vol. 115, Issue 1).**
- ***J. Chem. Phys. C* (January 13, 2011, Vol. 115, Issue 1).**
- ***J. Chem. Phys. Lett*. (January 6, 2011, Vol. 2, Issue 1).**

***ISI* Highly cited (Chemistry)/*ISI* Hot Paper (Chemistry).**
***ISI* Research front at "**controlled ultrasensitive surface-enhanced Raman scattering; gold nanostars; metal nanoparticle synthesis; SERS-active gold nanoflower tags; star-shaped gold nanoparticles"

- **Highlighted** as a part of the *Journal of Physical Chemistry* Virtual Theme Issue on "*Plasmon Resonances – A Physical Chemistry Perspective*" (Ed. Gregory V. Hartland and George C. Schatz)
- **Featured at the ACS *Journal of Physical Chemistry Letters* website.**
- **Featured as "*JPCL Perspective Video*" at the ACS *Journal of Physical Chemistry A, B, C and Letters* websites (**http://pubs.acs.org/page/jpclcd/ramon-video.html**).**
- **Dedicated Editorial:** Gregory V. Hartland "*Ultrahigh Fields in Ultrasmall* Spaces" **J. Phys. Chem. Lett.** (2010) 1, 2498–2498
- **Between the Most-Read Articles in *J. Phys. Chem. Lett.* 2010-2011**

63-M. Fernanda Cardinal, B. Rodríguez-González, **R.A. Alvarez-Puebla**, J. Pérez-Juste, L.M. Liz-Marzán* *Modulation of Localized Surface Plasmons and SERS Response in Gold Dumbbells through Silver Coating* ***Journal of Physical Chemistry C*** *(2010)* 114, 10417–10423 (DOI: 10.1021/jp102519n)

62-N. Pazos-Pérez, W. Ni, A. Schweikart, **R.A. Alvarez-Puebla,*** A. Fery,* L.M. Liz-Marzán* *Highly uniform SERS substrates formed by wrinkle-confined drying of gold colloids* ***Chemical Science*** *(2010)* 1, 174-178 (DOI: 10.1039/c0sc00132e)
Journal Cover (August 2010 Vol. 1, Issue 2).
Featured in *Chemie.de* June 22, 2010 *"SERS increases in crisis"*

Featured in *SpectroscopyNow.com* July 1, 2010 *"Gold wrinkles boost SERS"*
Featured in *Bilder zu Blick in die Forschung* *(2010)* 26, 1-3 *"Wohlgeordnete Goldpartikel: Eine solide Basis für Einblicke in Molekülstrukturen"*

61-S. Abalde-Cela, P. Aldeanueva-Potel, C. Mateo-Mateo, L. Rodriguez-Lorenzo, **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán,* *SERS biomedical applications of plasmonic colloidal particles* ***Journal of the Royal Society Interface*** *(2010)* 7, S435-S450 (DOI: 10.1098/rsif.2010.0125.focus)
Invited Review
Between the Most-Read Articles of the year (2010 and 2011) in *J.R.S. Interface*

60-R.A. Alvarez-Puebla,* L.M. Liz-Marzán,* *Environmental applications of plasmon assisted Raman scattering* ***Energy & Environmental Science*** *(2010)* 3, 1011-1017 (DOI:10.1039/c002437f)
Invited Review
Journal Cover (August 2010 Vol. 3, Issue 8)
***ISI* Highly cited (Environment/Ecology).**

59-A. Sánchez-Iglesias, P. Aldeanueva-Potel, J. Pérez-Juste, I. Pastoriza-Santos, **R.A. Alvarez-Puebla**, B.N. Mbenkum, L.M. Liz-Marzán* *Chemical Seeded Growth of Ag Nanoparticle Arrays and their Application as Reproducible SERS Substrates* ***NanoToday*** *(2010)* 5, 21-27 (DOI:10.1016/j.nantod.2010.01.002)
Between the Top 25 hottest articles in *NanoToday*, January-June 2010
Between the Top 25 hottest articles of the year (October 2009-September 2010) in *NanoToday*

58-P. Aldeanueva-Potel, M.A. Correa-Duarte, **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán *Free-standing carbon nanotube films as optical accumulators for multiplex SERRS attomolar detection* ***ACS Applied Materials and Interfaces*** *(2010)* 2, 19-22 (DOI: 10.1021/am9008715)
Between the Most-Read Articles in *ACS Applied Materials and Interfaces*, 2010

57-R.A. Alvarez-Puebla,* L.M. Liz-Marzán,* *SERS-based diagnosis and biodetection* ***Small*** *(2010)*, 6, 604-610 (DOI: 10.1002/smll.200901820*)*
Invited Concept Paper
***ISI* Highly cited (Materials Science).**
Most accessed article in Small, February-March 2010
Featured as Hot Topic in Wiley Website

56-L. Rodríguez-Lorenzo, **R.A. Alvarez-Puebla,*** F.J. García de Abajo, L.M. Liz-Marzán,* *Surface enhanced Raman scattering using star-shaped gold colloidal nanoparticles* ***Journal of Physical Chemistry C*** *(2010)* 114, 7336–7340 (DOI: 10.1021/jp909253w*)*
Invited Paper-*Martin Moskovits Festschrift*
Highlighted as a part of the *Journal of Physical Chemistry* Virtual Theme Issue on "*Plasmon Resonances – A Physical Chemistry Perspective*" (Ed. Gregory V. Hartland and George C. Schatz)
Featured at the ACS *Journal of Physical Chemistry C* website.

55-N. Pazos-Pérez,* S. Barbosa, L. Rodríguez-Lorenzo, P. Aldeanueva-Potel, J. Pérez-Juste, I. Pastoriza-Santos, **R.A. Alvarez-Puebla**, L.M. Liz-Marzán* *Growth of Sharp Tips on Gold Nanowires Leads to Increased SERS Activity* ***Journal of Physical Chemistry Letters*** *(2010)* 1, 24-27
Highlighted as a part of the *Journal of Physical Chemistry* Virtual Theme Issue on "*Plasmon Resonances – A Physical Chemistry Perspective*" (Ed. Gregory V. Hartland and George C. Schatz)
Most-Cited Article in *J. Phys. Chem. Lett.* 2009-2010
Between the Most-Read Articles in *J. Phys. Chem. Lett.* 2009-2010

Featured at the ACS *Journal of Physical Chemistry Letters* website.
Dedicated Editorial: G.C. Schatz, P.V. Kamat, S. Hammes-Schiffer, T.S. Zwier "*Looking Beyond the First Anniversary*" **J. Phys. Chem. Lett.** (2011) 2, 34-35

54-P. Aldeanueva-Potel, E. Faoucher, **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán, M. Brust *Recyclable molecular trapping and SERS detection in silver-loaded porous agarose gels with dynamic hot spots* ***Analytical Chemistry*** *(2009)* 81, 9233-9238
Featured at the ACS *Analytical Chemistry* website.

53-R. Perez-Pineiro, S. Dai, **R. Alvarez-Puebla**, J. Wigginton, B.J. Al-Hourani, H. Fenniri* *Synthesis of Sulfur-Containing Aryl and Heteroaryl Vinyls via Suzuki Cross-Coupling for the Preparation of SERS-Active Polymers* ***Tetrahedron Letters*** *(2009)* 50, 5467–5469

52-M. Sanles-Sobrido, L. Rodríguez-Lorenzo, S. Lorenzo-Abalde, A. González-Fernández, M.A. Correa-Duarte,* **R.A. Alvarez-Puebla**,* L.M. Liz-Marzán *Label-free SERS detection of relevant bioanalytes on silver coated carbon nanotubes: The case of cocaine* ***Nanoscale*** *(2009)* 1, 153-158
Featured at the RSC *Nanoscale* website.
Featured as *Top Ten Article* at the Nanoscale website.
Featured as *Hot Article* at the Nanoscale website.
Featured in the news:

- ***Highlights in Chemical Technology.*** *(2009)* 6, T75 (*http://www.rsc.org/Publishing/ChemTech/Volume/2009/10/analyte_sensing.asp*)
- ***Chemistry World.*** *(2009)* 6(10), 30 (*http://www.rsc.org/chemistryworld/Issues/2009/October/index.asp*)
- ***Nanowerk.com*** (*http://www.nanowerk.com/news/newsid=12199.php*)
- ***NanotechnologyNow.com*** (*http://www.nanotech-now.com/news.cgi?story_id=34304*)
- ***SiloBreaker.com*** (*http://www.silobreaker.com/analyte-sensing-made-easy-5_2262537040799203370*)
- ***USAToday.com*** (*http://content.usatoday.com/topics/article/Places,+Geography/States,+Territories,+Provinces,+Islands/U.S.+States/Georgia/0gmsa98d1IgzV/1*)
- ***Atlántico Diario***, 29 de octubre de 2009, "Investigadores vigueses desenvolven un método para a detección do consumo de drogas" (http://duvi.uvigo.es/images/quiosco/atlanticodi291009.jpg)
- ***Ibercampus.es***, 27 de octubre de 2009, "Investigadores de la Universidad de Vigo crean un revolucionario sistema para detectar el consumo de drogas" (http://www.ibercampus.es/articulos.asp?idarticulo=11292)
- ***Vigoalminuto.com***, 27 de octubre de 2009, "Investigadores vigueses desarrollan un test que detecta el consumo de drogas en segundos" (http://www.vigoalminuto.com/2009/10/investigadores-vigueses-desarrollan-un-test-que-detecta-el-consumo-de-drogas-en-segundos/)
- ***Universia.es***, 23 de octubre de 2009, "Investigadores vigueses desarrollan un método revolucionario para la detección del consumo de drogas" (http://www.universia.es/portada/actualidad/noticia_actualidad.jsp?noticia=103004)
- ***A Nosa Terra***, 23 de octubre de 2009, "*Saber ao instante canta droga consumiu un condutor*" (http://duvi.uvigo.es/images/quiosco/nos231009.pdf)
- ***Noticiasgalicia.com***, 23 de octubre de 2009, "*Investigadores vigueses desarrollan un método que detecta el consumo de drogas de manera fiable en cuestión de segundos*" (http://duvi.uvigo.es/images/quiosco/nog231009.pdf)
- ***Gaceta Universitaria***, 23 de octubre de 2009, "*Nuevo método para la detección de consumo de drogas*" (http://duvi.uvigo.es/images/quiosco/gaceta231009.pdf)
- ***Faro de Vigo***, 22 de octubre de 2009, "*Investigadores gallegos desarrollan un método para detectar el uso de drogas*" (http://duvi.uvigo.es/images/quiosco/f221009.jpg)
- ***La Voz de Galicia***, 22 de octubre de 2009, "*Un químico de Vigo crea un método veloz para detectar consumo de drogas*" (http://duvi.uvigo.es/images/quiosco/voz221009.jpg)
- ***Atlántico Diario***, 22 de octubre de 2009, "*Químicos crean un método para detectar el consumo de drogas*" (http://duvi.uvigo.es/images/quiosco/a221009.jpg)
- ***Xornal.com***, 22 de octubre de 2009, "*Galicia desarrolla una prueba rápida de consumo de drogas*" (http://duvi.uvigo.es/images/quiosco/xornal221009.pdf)
- ***La Opinión A Coruña***, 22 de octubre de 2009, "*Un invento gallego permite detectar el consumo de droga en unos segundos*" (http://duvi.uvigo.es/images/quiosco/opinion221009.pdf)
- ***Europa Press***, 21 de octubre de 2009, "*Investigadores vigueses desarrollan un método que detecta el consumo de drogas de manera fiable en cuestión de segundos*" (http://duvi.uvigo.es/images/quiosco/eur221009.pdf)
- ***DUVI***, 21 de octubre de 2009, "*Investigadores vigueses desenvolven un método revolucionario para a detección do consumo de drogas*" (http://duvi.uvigo.es/index.php?option=com_content&task=view&id=2770&Itemid=3)
- ***Atlántico Diario***, 7 de abril de 2010 "*La detección del consumo de cocaína se podría hacer ya*" (http://duvi.uvigo.es/images/quiosco/at070410.jpg)

51-C. Fernández-López, C. Mateo-Mateo, **R.A. Álvarez-Puebla**, J. Pérez-Juste, I. Pastoriza-Santos*, L.M. Liz-Marzán* *Highly Controlled Silica Coating of PEG-capped Metal Nanoparticles and Preparation of SERS-Encoded Particles* ***Langmuir*** *(2009)* 25, 13894–13899
Invited Paper-*Langmuir* 25th anniversary especial issue

50-A. Sanchez-Iglesias, M. Grzelczak, B. Rodríguez-González, **R.A. Álvarez-Puebla**, L.M. Liz-Marzán,* N.A. Kotov* *Gold Colloids with Unconventional Angled Shapes* ***Langmuir*** *(2009)* 25, 11431–11435

49-S. Abalde-Cela, S. Ho, B. Rodríguez-González, M.A. Correa-Duarte, **R.A. Álvarez-Puebla***, L.M. Liz-Marzán, N.A. Kotov* *Loading of exponentially grown LBL films with Ag nanoparticles and their application for generalized SERS detection* ***Angewandte Chemie International Edition*** (*2009*) 48, 5326 –5329

48-J. Rodríguez-Fernández,* A.M. Funston,* Jorge Pérez-Juste, **R. Álvarez-Puebla**, L.M. Liz-Marzán, P. Mulvaney *The Effect of Surface Roughness on the Plasmonic Response of Individual Gold Nanospheres* ***Physical Chemistry Chemical Physics*** *(2009)* 11, 5909–5914
Invited Paper- "*Nanophotonics: Plasmonics and Metal Nanoparticles*" themed issue
Featured as *Hot Article* at the *PCCP* website.

47-M. Sanles-Sobrido, M.A. Correa-Duarte,* S. Carregal-Romero**,** B. Rodríguez-González, **R.A. Álvarez-Puebla**, P. Hervés, L.M. Liz-Marzán *Highly Catalytic Dendritic Pt Nanostructures Supported onto Carbon Nanotubes* ***Chemistry of Materials*** *(2009)* 21, 1531-1535.
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46-M. Sanles-Sobrido, W. Exner, L. Rodríguez-Lorenzo, B. Rodríguez-González, M.A. Correa-Duarte,* **R. Alvarez-Puebla,*** L.M. Liz-Marzán *"Design of SERS-encoded, Sub-micron, Hollow Particles through Confined Growth of Encapsulated Metal Nanoparticles"* ***Journal of the American Chemical Society*** *(2009)* 131, 2699–2705

45-M. Spuch-Calvar, L. Rodríguez-Lorenzo, M.P. Morales, **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán***** *Bifunctional nanocomposites with long-term stability, as SERS optical accumulators for ultrasensitive analysis* ***Journal of Physical Chemistry C*** *(2009)* 113, 3373–3377.
Journal Cover (March 5, 2009 Vol. 113, Issue 9).
Featured at the ACS *Journal of Physical Chemistry C* website.

44-P. Taladriz-Blanco, L. Rodríguez-Lorenzo, M. Sanlés-Sobrido, P. Hervés,* M.A. Correa-Duarte, **R.A. Álvarez-Puebla,*** L.M. Liz-Marzán *SERS study of the controllable release of nitric oxide from aromatic nitrosothiols on bimetallic, bifunctional nanoparticles supported on carbon nanotubes* ***ACS Applied Materials and Interfaces*** *(2009)* 1, 56-59
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43-L. Rodríguez-Lorenzo, **R.A. Álvarez-Puebla,*** I. Pastoriza-Santos, S. Mazzucco, O. Stéphan, M. Kociak, L.M. Liz-Marzán, F.J. García de Abajo* *Zeptomol detection through controlled ultrasensitive surface-enhanced Raman scattering* ***Journal of the American Chemical Society*** *(2009)* 131, 4616–4618.
***ISI* Highly cited (Chemistry).**
***ISI* Research front at "**Controlled ultrasensitive surface-enhanced Raman scattering; gold nanostars; metal nanoparticle synthesis; sers-active gold nanoflower tags; star-shaped gold nanoparticles**"**

42-R.A. Alvarez-Puebla, R.F. Aroca* *Synthesis of silver nanoparticles with controllable surface charge and their application to SERS* ***Analytical Chemistry*** *(2009)* 81, 2280–2285
Between the Most-Read Articles in *Anal. Chem.* 2009

41-R.A. Álvarez-Puebla,* R. Contreras-Cáceres, I. Pastoriza-Santos, J. Pérez-Juste, L.M. Liz-Marzán* *Molecular traps for surface-enhanced, spectroscopic, ultra-sensitive analysis* ***Angewandte Chemie International Edition*** *(2009)* 48, 138-143
***ISI* Highly cited (Chemistry).**
***ISI* Research front at "**Single rhodamine 6G molecule surface-enhanced Raman excitation spectroscopy; single-molecule surface-enhanced Raman scattering hot spots; single-molecule surface-enhanced Raman spectroscopy; controlled ultrasensitive surface-enhanced Raman scattering**"**

40-A.A. Farah, J.P. Bravo-Vasquez, **R.A. Alvarez-Puebla**, J.Y. Cho, H. Fenniri* *Robust Au-PEG/PS Microbeads as Optically Stable Platforms for SERS* ***Small*** *(2009)* 5, 1283–1286

39-R.A. Alvarez-Puebla, J.P. Bravo-Vasquez, P. Cheben, D.X. Xu, P. Waldron, H. Fenniri* *SERS-active Ag/Au bimetallic nanoalloys on Si/SiO_x* ***Journal of Colloid and Interface Science*** *(2009)* 333, 237-241

38-M. Grzelczak, A. Sánchez-Iglesias, B. Rodríguez-González, **R.A. Alvarez-Puebla**, J. Pérez-Juste,* L.M. Liz-Marzán* *Influence of Iodide Ions on the Growth of Gold Nanorods: Tuning Tip Curvature and Surface Plasmon Resonance* ***Advanced Functional Materials*** *(2008)* 18, 3780-3786

37-S. Dai, A.A. Farah, **R.A. Alvarez-Puebla**, J.P. Bravo-Vasquez, H. Fenniri* *Fabrication and Characterization of Spectroscopically Encoded Core-shell Nanoparticle-polymer Nanocomposite In* "***Synthesis and Surface Engineering of Three-Dimensional Nanostructures***" (R. Houbertz, Ed) MRS ***Mater. Res. Soc. Symp. Proc*.** Volume 1054E**,** Warrendale, PA (*2008*) *1054-FF12-14*

36-J.P. Bravo-Vasquez, **R.A. Alvarez-Puebla**, D. Blais, Y. Zhang, J. Raez, J. Pezacki,* H. Fenniri* *Deconvolution of Self-encoded Polymer Beads in Random Microarrays for Antigen Biosensing by Raman Spectroscopy In* "***Combinatorial Methods for High-Throughput Materials Science****" (*D.S. Ginley, M.J. Fasolka, A. Ludwig, and M. Lippmaa, Eds.) ***Mater. Res. Soc. Symp. Proc*.** Volume 1024E**,** Warrendale, PA (*2008*) 1024-A04-10

35-B.J. Al-Hourani, S. Dai, **R.A. Alvarez-Puebla**, J.P. Bravo-Vasquez, H. Fenniri* *"Synthesis and Characterization of Spectroscopically Encoded Nanocomposites" In* **"*Nanophase and Nanocomposite Materials V*"** (S. Komarneni, K. Kaneko, J.C. Parker, and P. O'Brien, Eds.) ***Mater. Res. Soc. Symp. Proc.*** Volume 1056E, Warrendale, PA (*2008*), 1056-HH11-32.

34-D.R. Blais, **R.A. Alvarez-Puebla**, J.P. Bravo-Vasquez, H. Fenniri, J.P. Pezacki* *Multiplex pathogen detection based on spatially addressable microarrays of barcoded resins* ***Biotechnology Journal*** *(2008)* 3, 948-953

33-J. Coro, **R. Alvarez-Puebla**, A.L. Montero, M. Suárez, N. Martin, R. Perez-Pineiro* *A computational approach to the synthesis of 1,3,5-thiadiazinane-2-thiones in aqueous medium. Theoretical evidences of a water-promoted heterocyclization.* ***Journal of Molecular Modeling*** (*2008*) 14, 641-647

32-A.A. Farah, **R.A. Alvarez-Puebla**,* H. Fenniri* *Chemically Stable Silver Nanoparticle–Crosslinked Polymer Microspheres* ***Journal of Colloid and Interface Science*** (*2008*) 319, 572-576
Between the Top 25 hottest articles in *J. Colloid Surface Sci.*, January-June 2008

31-R. Baigorri, J.M. García-Mina, R. F. Aroca, **R.A. Alvarez-Puebla*** *Optical enhancing properties of anisotropic gold nanoplates prepared with different fractions of a natural humic substance* ***Chemistry of Materials*** (*2008*) 20, 1516-1521

30-R.A. Alvarez-Puebla, C. Valenzuela-Calahorro, J.J. Garrido, Z. Wang, X. Zhou
黃腐酸结构、构象和聚集过程的分子模拟研究 ***腐植酸*** (*2007*)年10月29日(10.3969/j.issn.1671-9212.2007.04.010)

29-R.A. Alvarez-Puebla, D.S. dos Santos Jr., R.F. Aroca* *SERS detection of environmental pollutants in humic acid-gold nanoparticle composite materials* ***The Analyst*** (*2007*) 132, 1210-1214

28-H. Fenniri,* **R. Alvarez-Puebla*** *High-throughput screening flows along* ***Nature Chemical Biology*** (*2007*) 3, 247-249

27-R.A. Alvarez-Puebla, J.P. Bravo-Vasquez, B. Cui, T. Veres, H. Fenniri* *SERS Classification of Highly Related Performance Enhancers* ***ChemMedChem*** (*2007*) 2, 1165-1167

26-R.A. Alvarez-Puebla, B. Cui, J.P. Bravo-Vasquez, T. Veres, H. Fenniri* *Fabrication and SERS characterization of nano-imprinted substrates with tunable plasmonic properties* ***Journal of Physical Chemistry C*** (*2007*) 111, 6720-6723

25-J. Raez, D. R. Blais, Y. Zhang, **R. A. Alvarez-Puebla**, J. P. Bravo-Vasquez, J. P. Pezacki,* H. Fenniri *Spectroscopically Encoded Microspheres for Antigen Biosensing* ***Langmuir*** (*2007*) 23, 6482-6485

24-J.P. Bravo-Vasquez, **R.A. Alvarez-Puebla**, H. Fenniri* *Random arrays based on self-encoded polymer beads for microarray technologies* ***Sensors and Actuators B: Chemical*** (*2007*) 125, 357-359

23-A.I. Kharlamov, N.V. Kirillova, Z.A. Zaitseva, V.P. Smirnov, M.E. Golovkova, **R. Alvarez-Puebla*** *A new state of carbon: transparent thread-like anisotropic crystals* ***Reports of the National Academy of Sciences of Ukraine*** (*2007*) 5, 148-154 (**Invited Paper**)

22-J. Zhang, Y. Gao, **R.A. Alvarez-Puebla**, J.M. Buriak,* H. Fenniri *Synthesis and SERS properties of nanocrystalline gold octahedra generatedfrom thermal decomposition of $HAuCl_4$ in block copolymers* ***Advanced Materials*** (*2006*) 18, 3233-3237
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21-R.A. Alvarez-Puebla, G-A. Nazri, R.F. Aroca* *Fabrication of stable bimetallic nanostructures on nafion membranes for optical applications* ***Journal of Materials Chemistry*** (*2006*) 16, 2921–2924

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19-R.A. Alvarez-Puebla, C. Valenzuela-Calahorro, J.J. Garrido* *Theoretical study on the fulvic acid structure, conformations and aggregation. A molecular modeling approach* ***Science of the Total Environment*** (*2006*) 358, 243-254

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17-R.A. Alvarez-Puebla, D.J. Ross, G-A. Nazri, R.F. Aroca* *Surface-enhanced Raman scattering on nanoshells with tunable surface plasmon resonance* ***Langmuir*** (*2005*) 21, 10504-10508

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15-R.F. Aroca,* **R.A. Alvarez-Puebla**, N. Pieczonka, S. Sanchez-Cortez, J.V. Garcia-Ramos *Surface-enhanced Raman scattering on colloidal nanostructures* ***Advances in Colloid and Interface Science*** (*2005*) *116,* 45-61
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14-P. Goulet, D.S. dos Santos Jr., **R.A. Alvarez-Puebla**, O.N. Oliveira Jr., R.F. Aroca* *Surface-enhanced Raman scattering on dendrimer/metallic nanoparticle layer-by-layer film substrates* ***Langmuir*** (*2005*) *21*, 5576-5581

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12-R.A. Alvarez-Puebla,* P.J.G. Goulet, J.J. Garrido *Characterization of the porous structure of different humic fractions* ***Colloids and Surfaces A: Physicochemical and Engineering Aspects*** (*2005*) *256*, 129-135
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11-R.F. Aroca,* P.J.G. Goulet, D.S. dos Santos, **R.A. Alvarez-Puebla**, O.N. Oliveira *Silver nanowire layer-by-layer films as substrates for surface-enhanced Raman scattering* ***Analytical Chemistry*** (*2005*) *77*, 378-382
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10-R.A. Alvarez-Puebla,* J.J. Garrido, C. Valenzuela-Calahorro, P.J.G. Goulet *Retention and induced aggregation of Co(II) on a humic substance: sorption isotherms, infrared absorption, and molecular modeling* ***Surface Science*** (*2005*) *575*, 136-146

9-R.A. Alvarez-Puebla,* J.J. Garrido* *Effect of pH on the aggregation of a gray humic acid in colloidal and solid states* ***Chemosphere*** (*2005*) *59*, 659-667

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7-C. Aisa, **R.A. Alvarez-Puebla**, J. Blasco, J.C. Echeverría, J.J. Garrido* *Combining DLS, XRD, SEM-EDAX and EXAFS in the study of Zn(II) retention on a palygorskitic clay* ***Clay Minerals*** (*2005*) 40, 205-212

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10*-R.A. Alvarez-Puebla**, M. S. Gomez de Pedro, M. Garcia-Algar, M. Nazarenus, X. Feng, M. Sanchez-Alvarez, P. Sánchez Arizmendiarrieta, D. Delgado San Vicente, A. Garate Letona, J. Alonso Chamarro, M.M. Puyol Bosch, A. Calvo López ***Device and method for the preparation of platelet rich plasma, Universitat Rovira i Virgili*, ICREA, CTQC,* Medcom Advance S.A., Medcom Tech S.A., Universidad Autonoma de Barcelona, Unidad de Cirugia Artroscopica S.L., Unidad de Terapia Biologica Avanzada S.L. PCT/EP17382271; US Patent App. 16/613,068. Licensed by Medcom Science SA, Spain

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9*-R.A. Alvarez-Puebla**, E Garcia-Rico, F. Diaz, J. Massons, E. Pedrol, M. Nazarenus, M. Garcia ***Optofluidic device and method for detecting circulating tumour cells, Universitat Rovira i Virgili*, Grupo HM Hospitales, CTQC, ICREA,* Medcom Advance SA, Medcom Tech SA. PCT/EP17382192; US Patent App. 16/603,229 Licensed by Medcom Science SA, Spain

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8*-R.A. Alvarez-Puebla**, N. Pazos-Perez, E. Pazos, C. Catala. B. Mir-Simon; S Gomez-de-Pedro; C. Villanueva, J. Sagales-Mañas ***A method for detection of presence or absence of analytes in fluids and an optical detection system for carrying out the method, Universitat Rovira i Virgili*, CTQC, ICREA,* Medcom Advance SA, Medcom Tech SA. PCT/EP2015/067717; WO2017/020936A1; US Patent App. 15/749,125, 2018. Licensed by Medcom Advance SA, Spain

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7*-R.A. Alvarez-Puebla**, L. Guerrini, D. Graham, J. Sagales-Mañas ***Nucleic acid-induced aggregation of metal nanoparticles and uses thereof in methods for detecting nucleic acids, Universitat Rovira i Virgili*, CTQC, ICREA,* Medcom Tech SA*, Strathclyde University.* PCT/EP14382415; WO2016/062861A1.; US20170335376A1 Licensed by Medcomtech SA, Spain

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6*-R.A. Alvarez-Puebla,** R. Fenollosa, E. Garcia-Rico, S. Alvarez, R. Alvarez, X. Yu, I. Rodriguez, S. Carregal-Romero, C. Villanueva, P. Rivera-Gil, A.R. de Lera, W.J. Parak, F. Meseguer, ***Silicon particles targeting tumor cells, ICREA, Universitat Rovira i Virgili, CTQC, CSIC, Philipps-Universitat Marburg, Universidade de Vigo, Medcom Tech SA. P10564EP00; PCT/EP14382182.5; WO2015/177340A1. Licensed by Medcomtech SA, Spain

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5*-R.A. Alvarez-Puebla,** F.J. Meseger, Isabelle Rodriguez, L. Shi, X. Lu, B.A. Korgel ***Sonda y sustrato para espectroscopia de dispersión Raman, procedimiento de preparación y uso, ICREA, Universitat Rovira i Virgili, CSIC, University of Texas. P201331814

4*-R.A. Alvarez-Puebla,** ***Method and system for the multiplex identification of analytes in fluids WO2015/011231A1. PCT/EP2014065930, ICREA, Universitat Rovira i Virgili, CTQC. Licensed by Medcom Advance SA, Spain

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3*-R.A. Alvarez-Puebla,** M. Alba, N. Pazos-Perez, B. Vaz, P. Tormentín, M. Tebbe, M.A. Correa-Duarte, P. Granero, J. Ferré-Borrull, R. Alvarez, J. Pallares, A. Fery, A.R. de Lera, L.F. Marsal ***Procedimiento para la fabricación de supercristales coloidales con campos electromagnéticos altamente localizados y su utilización para la detección y monitorización de analitos P26763ES00-27032013, ICREA, Universitat Rovira i Virgili, Universidad de Vigo.

2*-R.A. Alvarez-Puebla,** E García-Rico, L.M. Liz-Marzan, F.J. García de Abajo ***Encoded Particles WO2012/143577A1, PCT/ES2011000130, Universidad de Vigo, CSIC. Licensed by SPD Swiss Precision Diagnostics GmbH, Switzerland

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1*-H. Fenniri, R.A. Alvarez-Puebla *Substrate for Surface-Enhanced Raman Scattering WO2010/094106, PCT/CA2010000041, National Research Council of Canada

Confidential Technical reports (4)

4	**R.A. Alvarez-Puebla**, J.P. Bravo-Vasquez, H Fenniri *GHI-3 Pathogen Detection Program Semi-Annual Report. Ottawa,* May 2007.
3	**R.A. Alvarez-Puebla**, J.P. Bravo-Vasquez, *ID Global, Spectroscopically encoded fibers. Edmonton,* February, 2007.
2	**R.A. Alvarez-Puebla**, J.P. Bravo-Vasquez, H Fenniri *GHI-3 Pathogen Detection Program Semi-Annual Report. Ottawa*, December 2006.
1	**R.A. Alvarez-Puebla,** *General Motors Corporation. Warren, MI,* December 2005.

Invited Speaker in Conferences and Seminars (101)

101*- R.A. Alvarez-Puebla** 40 Years of increasing complexity in SERS analysis, ***2th International Conference on SERS, Suzhou, China, 2019 **Keynote Lecture**

101*- R.A. Alvarez-Puebla** Hot spots in SERS, ***ACS Fall 2019 National Meeting & Exposition, San Diego, CA, USA 2019 **Invited Talk**

100*- R.A. Alvarez-Puebla** SERS encoded particle for applications in biology ***CENIDE Photon Science Colloquium, Essen, Germany, 2019 **Plenary Lecture**

99*- R.A. Alvarez-Puebla** Single particle and complex hot spots ***NANAX9 2019, Germany, 2019 **Keynote Lecture**

98*- R.A. Alvarez-Puebla** 3D Hot spots through colloidal assembly ***Meta 2019 Lisboa, Portugal, 2019 **Keynote Lecture**

97*- R.A. Alvarez-Puebla** Direct diagnosis with SERS in bioliquids ***Skolkovo Institute of Science and Technology Moscow, Russia, 2019 **Keynote Lecture**

96*- R.A. Alvarez-Puebla** SERS encoded particles ***BioMetaNano 2019 San Petersburg, Russia, 2019 **Keynote Lecture**

95*- R.A. Alvarez-Puebla** Florescence Vs SERS: Drawbacks and synergisms ***ICES 2019, London, ON, Canada, 2019 **Plenary Lecture**

94*- R.A. Alvarez-Puebla** SERS advances in nanomedicine ***Hamburg Photon Science Colloquium, Hamburg, Germany, 2019 **Plenary Lecture**

93*- R.A. Alvarez-Puebla** Particles and microfluidics in optical detection ***ACS Spring 2019 National Meeting & Exposition, Orlando, Fl, USA 2019 **Invited Talk**

92*- R.A. Alvarez-Puebla** Diagnosis of infectious disease with optical methods ***Universitat de les Illes Balears Palma de Mallorca, Spain, 2019 **Keynote Lecture**

91*- R.A. Alvarez-Puebla** Complex plasmonic hybrid nanoparticles ***Universidade de Vigo Vigo, Spain, 2019 **Keynote Lecture**

90*- R.A. Alvarez-Puebla** Plasmonics in diagnosis ***Universitat Hamburg, Hamburg, Germany, 2018 **Keynote Lecture**

89*- R.A. Alvarez-Puebla** Optical Liquid Biopsies ***MetaNano 2018 Sochi, Russia, 2018 **Keynote Lecture**

88*- R.A. Alvarez-Puebla** Optical detection in complex media ***Meta 2018 Marseille, France, 2018 **Invited Speaker**

87*- R.A. Alvarez-Puebla** Microfluidics and metabolic dying in liquid biopsy ***Spring 2018 ACS national meeting, New Orleans, LA, USA, 2018 **Invited Speaker**

86*- R.A. Alvarez-Puebla** Surface selection rules in indirect SERS detection ***ICORS 2018, Jeju Island, Korea, 2018 **Keynote Lecture**

85*- R.A. Alvarez-Puebla** Particles, SERS and biomarkers ***Universidade de Santiago de Compostela, Santiago de Compostela, Spain, 2017 **Plenary Lecture 24 Nov**

84*- R.A. Alvarez-Puebla** Coupling plasmonics to microfluidics for diagnostics ***Universidade de Vigo, Vigo, Spain, 2017 **Plenary Lecture**

83*- R.A. Alvarez-Puebla** Diagnosing with light ***Phillips Universitat Marburg, Marburg, Germany, 2017 **Plenary Lecture**

82*- R.A. Alvarez-Puebla** Cancer diagnosis and prognosis with SERS and/or fluorescence ***EUROMAT 2017 Thessaloniki, Greece, 2017 **Highlight Lecture**

81*- R.A. Alvarez-Puebla** Disease classification using nanoparticles ***15th European Conference on Organized Films Dresden, Germany, 2017 **Keynote Lecture**

80*- R.A. Alvarez-Puebla** Ultrafast optical detection and recounting of microorganism in complex media ***Université Paris Diderot-Paris 7 Paris, France, 2017 **Plenary Lecture**

79*- R.A. Alvarez-Puebla** Optical techniques for fast clinical diagnosis ***Université Paris Descartes-Paris 5 Paris, France, 2017 **Plenary Lecture**

78*- R.A. Alvarez-Puebla** Plasmonic supercrystals for SERS detection. ***ACS National Meeting - San Francisco 2017- 253rd American Chemical Society National Meeting & Expo *San Francisco, USA, 2017,* **Invited Speaker**

***77*-R.A. Alvarez-Puebla** Optical methods in cancer diagnosis **9th Asian Photochemistry Conference** *Singapore*, 2016, **Keynote Speaker**

***76*-R.A. Alvarez-Puebla** Applications of plasmonic hybrid materials as advanced optical sensors **Plasmonique Moléculaire et Spectroscopies Exaltées 2016** *Bordeaux, France*, 2016, **Plenary Lecture**

***75*-R.A. Alvarez-Puebla** Colloids for optical diagnosis **251st ACS National Meeting** *Philadelphia, USA*, 2016, **Invited Speaker**

***74*-R.A. Alvarez-Puebla** Fast optical diagnosis in complex biological media, **MediNano-8** *Istanbul, Turkey*, 2016, **Invited Speaker**

***73*-R.A. Alvarez-Puebla** Optical liquid biopsy in microfluidic devices, **META'16, the 7th International Conference on Metamaterials, Photonic Crystals and Plasmonics** *Malaga, Spain*, 2016, **Invited Speaker**

***72*-R.A. Alvarez-Puebla** Label-Free direct SERS of nucleic acids, **SPIE Photonics West** *San Francisco, USA*, 2016, **Invited Speaker**

***71*-R.A. Alvarez-Puebla** Diagnosis of Cancers through liquid Biopsy, **SPIE Photonics West** *San Francisco, USA*, 2016, **Invited Speaker**

***70*-R.A. Alvarez-Puebla** Diagnosis and treatment of cancer by using nanomaterials and/or optical methods, **Instituto de Investigación Biomédica de Bellvitge (IDIBELL)** *Barcelona, Spain*, 2015, **Plenary Lecture**

***69*-R.A. Alvarez-Puebla** Plasmonics in Biology, **Department of Material Sciences, University of Xiamen**. *Xiamen, China*, 2015, **Plenary Lecture**

***68*-R.A. Alvarez-Puebla** Optical diagnosis of infectious diseases, **Department Chemistry, University of Xiamen**. *Xiamen, China*, 2015, **Plenary Lecture**

***67*-R.A. Alvarez-Puebla** Plasmonic diagnostic in biological fluids, **Yucomat 2015-MRS-Serbia**. *Herceg Novi, Montenegro*, 2015, **Plenary Lecture**

***66*-R.A. Alvarez-Puebla** SERS applications in chemical biology, **XXIV International Materials Research Congress**, *Cancun Mexico*, 2015, **Invited Speaker**

***65*-R.A. Alvarez-Puebla** Old chemistry for the new sensing, **ICMAT 2015**. *Singapore*, 2015, **Invited Speaker**

***64*-R.A. Alvarez-Puebla** SERS Applications in Biology and Medicine, **IMRE a*STAR**. *Singapore*, 2015, **Invited Speaker**

***63*-R.A. Alvarez-Puebla** Multiplex optical quantification of microorganism in biofluids, **Nanyang Technical University**. *Singapore*, 2015, **Invited Speaker**

***62*-R.A. Alvarez-Puebla** Real time quantification of microorganism in complex fluids, **Surface enhanced Spectroscopies 2014**. *Chemnitz, Germany*, 2014, **Invited Speaker**

***61*-R.A. Alvarez-Puebla** *Silicon colloids. Optical properties and applications*, **The 5th International Conference on Metamaterials, Photonic Crystals and Plasmonics (*Meta14)*,** *Singapur,* 2014**, Invited Speaker**

***60*-R.A. Alvarez-Puebla** *Silicon Nanocavities for Mie-Assisted Raman Scattering Amplification*, ***MRS Spring Meeting*,** *San Francisco, CA, USA,* 2014**, Invited Speaker**

59*-R.A. Alvarez-Puebla** *Real time detection and diagnostics using plasmonic particles*, ***247th ACS National Meeting & Exposition*, *Dallas, *TX, USA,* 2014**, Invited Speaker**

58*-R.A. Alvarez-Puebla** *Real time diagnostics of infectious diseases*, ***SPIE Photonics West, *San Francisco, CA, USA,* 2014, **Invited Speaker**

***57*-R.A. Alvarez-Puebla** *Plasmons in chemical biology, **Universitat Jaume I**, Castellon,* 2013, **Invited Speaker**

56*-R.A. Alvarez-Puebla** *Plasmon for fast diagnosis*, ***UOF Meeting, *Bali, Malaysia,* 2013, **Invited Speaker**

55*-R.A. Alvarez-Puebla** *Mutiplex real time diagnosis and recount of infectious agents in real time*, ***Nanomaterials, *Playa del carmen, Mexico,* 2013, **Invited Speaker**

54*-R.A. Alvarez-Puebla** *Synthesis and applications of plasmonic particles*, ***EMN East Meeting, *Beijing, China,* 2013, **Invited Speaker**

***53*-R.A. Alvarez-Puebla** *Plasmonic particles in nanomedicine **ICMAB**, Barcelona,* 2013, **Invited Speaker**

***52*- R. Alvarez-Puebla** *Optical biosensing with plasmonic particles **International Conference on Materials for Advanced Technologies (ICMAT 2013)** Singapore, 2013*, **Invited Speaker**

***51*-R.A. Alvarez-Puebla** *Remote optical sensors for environmental applications **Repsol**, Tarragona,* 2012, **Invited Speaker**

50*-R.A. Alvarez-Puebla** *Optically dense colloidal nanoparticles as discrete platforms for bio-SERS*, ***SPIE Photonics West, *San Francisco, CA, USA,* 2012, **Invited Speaker**

***49*-R.A. Alvarez-Puebla** *Plasmonic nanoparticles for a better life **Department of Physics, Universidad Politecnica de Valencia**, Valencia,* 2012, **Invited Speaker**

48*-R.A. Alvarez-Puebla** *Assembled nanostructures for SERS diagnostics **Spec 2012-Shedding New Light on Disease Chiang Mai, Thailand*,* 2012 **Invited Speaker**

47*-R.A. Alvarez-Puebla** *Optical biodetection and diagnostic strategies with SERS **SPIE World Congress of Nanosystems in Engineering + Medicine. Incheon, Korea*,* 2012 **Invited Speaker**

46*-R.A. Alvarez-Puebla** *Medical applications of plasmonic particles **Universitat Estiu 2012, Universitat Rovira i Virgili. Tarragona, Spain*,* 2012 **Invited Speaker**

***45*-R.A. Alvarez-Puebla** *SERS spiked particles **IMDEA-Nanoscience**, Madrid,* 2012, **Invited Speaker**

***44*-R.A. Alvarez-Puebla** *Optical sensing in chemical biology **Department of Physics, University of Liverpool**, UK,* 2012, **Invited Speaker**

43*-R.A. Alvarez-Puebla** *Optical sensing with spiked-particles **SPIE Optics + Photonics, *San Diego, CA, USA.* 2012, **Invited Speaker**

***42*-R.A. Alvarez-Puebla** *SERS applications in chemical biology, **1st Biannual Meeting of the Biological Chemistry Group of RSEQ,** Santiago de Compostela, Spain,* 2012, **Invited Lecture**

***41*-R.A. Alvarez-Puebla** *Ultrasensitive SERS analysis*, ***CIMTEC 2012-4th International Conference on Smart Materials, Structures and Systems**, Montecatini Terme, Italy,* 2012, **Invited Lecture**

40*-R.A. Alvarez-Puebla**, F. Javier García de Abajo, Luis M. Liz-Marzán *Hot spots and confinement in metal nanoparticles and assemblies*, ***Photonics, Plasmonics and Magneto-Optics International Conference, *Bilbao, Spain,* 2011, **Invited Speaker**

***39*-R.A. Alvarez-Puebla** *Novel materials for SERS Ultradetection*, ***Department of Physics, Philipps Universität Marburg**, Margburg, Germany,* 2011, **Invited Speaker**

38*-R.A. Alvarez-Puebla** *Supported colloidal nanoparticles as SERS substrates,* ***Department of Physics, Freie Universität Berlin. *Berlin, Germany,* 2011, **Invited Speaker**

37*-R. Álvarez-Puebla** *Nanociencia y nanotecnología, ciencia ficción a nuestro alcance* ***Facultad de Ciencias, Universidad de Extremadura, Badajoz, Spain*,* 2011, **Invited Speaker**

36*-R. Álvarez-Puebla** *Sensores ópticos para biodetección y diagnosis*, ***Departamento de Química Orgánica e Inorgánica, Facultad de Ciencias, Universidad de Extremadura, Badajoz, Spain, 2011, **Invited Speaker**

***35*-R. Álvarez-Puebla** *Aplicaciones biomédicas de partículas plasmónicas* ***La llum com a font d'energia: del laboratori al món industrial*. Universitat Estiu 2010, Universitat Rovira i Virgili.** Tarragona, Spain*,* 2011 **Invited Speaker**

34*-R.A. Alvarez-Puebla** Advanced hibrid materials and their applications in optical sensing devices **Invited Speaker**. ***XXXIII Reunión Bienal de la RSEQ *Valencia, Spain,* 2011, **Invited Speaker**

33*-R.A. Alvarez-Puebla** *Plasmonic encoding of the microworld.* ***International Workshop on Nanoplasmonics for Energy and the Environment. *Sanxenxo, Spain,* 2011, **Invited Speaker**

32*-R.A. Alvarez-Puebla** *Nanoparticles for detection technologies,* **Invited Speaker**, ***CIC nanoGUNE, *San Sebastian, Spain.* 2011, **Invited Speaker**

31*-**L.M. Liz-Marzán, **R.A. Alvarez-Puebla** *Engineering metal nanoparticles for environmental monitoring.* **Invited Speaker**. ***241st ACS National Meeting, *Anaheim, CA, USA,* 2011, **Invited Speaker**

30*-R.A. Alvarez-Puebla** *Design of hybrid plasmonic materials for SERS direct and indirect sensing* ***SPIE Optics + Photonics, *San Diego, CA, USA.* 2011, **Invited Speaker**

29*-R.A. Alvarez-Puebla** *Direct and indirect strategies for SERS bio-applications* ***Symposium on nanomaterial-based sensors for biomedical applications, *North Ryde, Sydney, SNW, Australia,* 2011, **Keynote Speaker**

28*-R.A. Alvarez-Puebla** *Diagnosis and imaging with SERS encoded particles* ***SPIE Photonics West *San Francisco, CA, USA,* 2011, **Invited Speaker**

27*-**A. Schweikart, N. Pazos-Perez, M. Schmidt, A. Fortini, A. Wittemann, L. Liz-Marzan, A. Fery, **R. Alvarez-Puebla** *Nanoparticle Structure Formation by Confined Drying in Wrinkles.* **2011 Materials Research Society Spring Meeting. San Francisco, CA, USA,* 2011, **Invited Speaker**

26*-R. Álvarez-Puebla**, M.A. Correa-Duarte, I. Pastoriza-Santos, J. Pacifico, L.M. Liz-Marzán *Design and properties of SERS encoded colloids* ***239th ACS National Meeting, *San Francisco, CA, USA,* 2010, **Invited Speaker**

25*-R.A. Alvarez-Puebla** *Hot Regions in Nanostructures.* ***International Workshop on Molecular Materials*. Sanxenxo, Spain,* 2010, **Invited Speaker**

24*-R. A. Alvarez-Puebla**, L. M. Liz-Marzan, I. Pastoriza-Santos, J. Perez-Juste *Colloidal Nanocomposites for Surface Plasmon-Based Sensing* ***2010 Materials Research Society Spring Meeting. *San Francisco, CA, USA,* 2010, **Invited Speaker**

***23*-R. Álvarez-Puebla** *Diagnóstico y biodetección mediante nanoestructuras plasmónicas y SERS* **Departamento de Química Física. Universidad de Malaga.** Malaga, Spain.2010, **Invited Speaker**

***22*-R. Álvarez-Puebla** *Aplicaciones biomédicas de partículas plasmónicas* ***Fotònica i fotovoltaica molecular: opcions de futur*. Universitat Estiu 2010, Universitat Rovira i Virgili.** Tarragona, Spain*,* 2010, **Invited Speaker**

***21*-R. Álvarez-Puebla** *A Nanotecnoloxía. Unha gran revolución a pequena escala* **Fundación Pedro Barrié de la Maza-Banco Pastor,** Vigo, Spain*,* 2009, **Invited Speaker**

***20*-R. Álvarez-Puebla** *Sensores ópticos nanoestucturados basados en Raman/SERS y fluorescencia/SEF*, ***Nanotecnologias en biomedicina*. Universidad Internacional Menéndez Pelayo**. La Coruña; Spain*,* 2009, **Invited Speaker**

***19*-R. Álvarez-Puebla** *SERS ultra-detection on plasmonic particles and composites* **Department of Physical Chemistry II. University of Bayreuth,** Bayreuth; Germany*,* 2009, **Invited Speaker**

18*-R. Álvarez-Puebla** *Optical properties of nanoparticles: Integration into optical sensor devices* **Department of Chemistry. University of Cambridge,* Cambridge, UK, 2009, **Invited Speaker**

17*-R. Álvarez-Puebla,** I. Pastoriza-Santos, J. Perez-Juste, M. Spuch-Calvar, L. Rodriguez-Lorenzo, L.M. Liz-Marzan *Design of colloid metallodielectric nanocomposites for ultrasensitive detection*. ***44th Biennial Meeting of the German Colloid Society *Hamburg, Germany,* 2009, **Invited Speaker**

16*-R. A. Alvarez-Puebla,** L.M. Liz-Marzan, A. Sanchez-Iglesias, I. Pastoriza-Santos, J. Perez-Juste, R. Contreras-Caceres, A. Fernandez-Barbero *Gold Nanoparticle-Microgel Composites for SERS Detection.* ***2009 Materials Research Society Fall Meeting, Boston, MA, USA*,* 2009, **Invited Speaker**

15*-R. Álvarez-Puebla** *Synthesis and preparation of new nanostructured materials with optical activity for ultra-sensitive analysis* ***BioNanotechnology: Development and application of principles of Nano- and Bio-Sciences to sensing, diagnostics and therapy. *Sintra, Portugal,* 2009, **Invited Speaker**

14*-R. Álvarez-Puebla** *Multifunctional Nanoparticles for Biolabeling, Bioseparation and Bioimaging* ***International Conference on Materials for Advanced Technologies (ICMAT 2009) *Singapore, 2009*, **Invited Speaker**

13*-R. Alvarez-Puebla**, M. Correa-Duarte, L. Liz-Marzan *Composite carbon nanotubes as functional materials for catalysis, drug delivery and analytical detection*. ***216th Electrochemical Society Meeting, Vienna, Austria*,* 2009, **Invited Speaker**

***12*-R.A. Alvarez-Puebla** *Integration of nanostructured materials into optical sensing devices* **Timac Agro (Roullier Group)**. Pamplona (Navarra); España, 2008, **Invited Speaker**

***11*-R.A. Alvarez-Puebla** *Nanopartículas para su posible uso en biosensores* **Consolider-Electrochemical biosensors. Universidad Autonoma de Barcelona**, Bellaterra (Barcelona); España 2008, **Invited Speaker**

10*-R.A. Alvarez-Puebla** *SERS applications of nanoparticles* ***COST D43 action. Colloid and interface chemistry for nanotechnology; Colloid materials in biosensors; 2nd Meeting of Workgroup Vigo, España*,* 2008, **Invited Speaker**

9*-R.A. Alvarez-Puebla**; M. Sanles-Sobrido; L. Rodriguez-Lorenzo; M.A. Correa-Duarte; L.M. Liz-Marzan *SERS-Encoded substrates for ultrafast biodetection* ***2008 E-MRS Fall Meeting Warsaw, Poland, 2008, **Invited Speaker**

8*-R. Alvarez-Puebla**, J.P. Nolan; D.A. Watson; L. Yang; L.O. Brown; S.K. Doorn; H. Fenniri; M. Naivar; S.W. Graves *A Raman Spectral Flow Cytometer* ***XXIV International Congress of the International Society for Analytical Cytology, Budapest, Hungary, 2008, **Invited Speaker**

***7*-R.A. Alvarez-Puebla** *Detection devices based in Raman/SERS.* **Universidade de Vigo.** Vigo, Spain, 2007, **Invited Speaker**

6*-R.A. Alvarez-Puebla** *SERS for indirect sensing. Invited Speaker. Department of Chemistry and Biochemistry. University of Windsor.** Windsor, Ontario; Canada, 2007, **Invited Speaker**

5*-R.A. Alvarez-Puebla,** D.R. Blais, J.P. Bravo-Vasquez, H. Fenniri, J.P. Pezacki *Spectroscopically encoded microspheres for multiplexed pathogen immunoassay detection.* ***7th Annual General Meeting. NRC Genomics and Health Initiative (NRC-GHI) Halifax, NS. Canada*.* 2007, **Invited Speaker**

***4*-R.A. Alvarez-Puebla**, *Fabrication and characterization of polymer-nanoparticle composites for optical labeling.* **La Jolla Bioengineering Institute**. La Jolla; CA; USA, 2006, **Invited Speaker**

3*-R.A. Alvarez-Puebla** *Synthesis, modification and characterization of nanostructured materials and their application to surface-enhanced vibrational spectroscopies* **National Institute for Nanotechnology-University of Alberta.* Edmonton; Alberta; Canada, 2006, **Invited Speaker**

2*-R.A. Alvarez-Puebla**, R.F. Aroca, G-A. Nazri *Fabrication of stable bimetallic nanostructures on nafion membranes. SERS characterization and applications* ***89th Canadian Chemistry Conference and Exhibition. The Canadian Society for Chemistry. Halifax, NS, Canada. 2006, **Invited Speaker**

1*-R.A. Alvarez-Puebla**, G-A. Nazri, R.F. Aroca *Immobilized bimetallic nanoshells as new substrates for ultra-sensitive chemical analysis.* ***88th Canadian Chemistry Conference and Exhibition. The Canadian Society for Chemistry. Saskatoon, SK Canada, 2005, **Invited Speaker**

ON-GOING (MAJOR) COLLABORATIONS

9. Prof. Roger Guimera – Universitat Rovira i Virgili, Spain. ***Complex systems, Statistical physics, Bayesian statistics***

8. Prof. Niek Van Hulst - Institut de Ciencies Photoniques (ICFO), Spain. ***Quantum Photonics.***

7. Prof. Nicholas A. Kotov - Department of Chemical Engineering; University of Michigan; USA. ***Colloidal Particles; Thin Films and Hybrid Materials.***

6. Prof. Vincenzo Giannini – Instituto de Óptica; Madrid (CSIC), Spain. ***Plasmonic modeling***

5. Prof. Wolfgang Parak – Department of Physics; Philipps-University of Marburg; Germany. ***Bionanomedicine and biophotonics.***

4. Prof. Jose Luis Mascareñas – Universidade de Santiago de Compostela, Santiago de Compostela, Spain ***Chemical biology.***

3. Prof. Stefan Maier - Ludwig-Maximilians-Universität München – ***Mid-IR and single particle spectroscopy.***

Prof. Nordin Felidj – Université Paris Diderot, ***Plasmonic surfaces.***

2. Prof. Olivia Reinaud – Université Paris Descartes, ***Organic materials for optical sensing.***

1. Prof. F. Javier García de Abajo - Nanophotonics Group; ICFO. ***Modeling of Optical Properties of Nanoparticles and Nanoparticle Assemblies and their Field Enhancement.***