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ICREA Research Professor

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ramon.alvarez@urv.cat**ORCID:** orcid.org/0000-0003-4770-5756**ResearcherID:** F-5053-2014**Academic/professional activities**

Date	Title	Place
21/10/12-...	ICREA Professor	ICREA, Barcelona, Spain
1/10/13-...	ICREA Professor	Departamento de Química Física e Inorgánica, Universitat Rovira i Virgili, Tarragona, Spain
21/10/12-31/9/2013	ICREA Professor	Departamento de Ingeniería Electrónica y Automática, Universitat Rovira i Virgili, Tarragona, Spain
21/12/07-20/10/12	Ramon y Cajal Research Scientist/Associate Professor	Departamento de Química Física, 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)
- Associate Editor, *Theranostics* (IF: 11.556, <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, <https://chemistry-europe.onlinelibrary.wiley.com/journal/26292742>)
- Editorial Advisory Board, *Interdisciplinary Medicine* (Wiley-VCH, <https://onlinelibrary.wiley.com/journal/28326245>)
- 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, <https://pubs.rsc.org/en/journals/articlecollectionlanding?sercode=nr&themeid=05796a1d-36e3-49ae-9790-a5b86c2f17ef>) 2020-2021
- Guest Editor, *Advanced Materials Interfaces* (IF: 5.4; <https://onlinelibrary.wiley.com/journal/21967350> Themed Issue on Advances in Plasmonics and Its Applications) 2023-2025
- Guest Editor, *npj Biosensing* (Global Health Diagnostics – Addressing Animal and Crop Health, <https://www.nature.com/collections/fbcigieich>) 2024-2025
- 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)
- Scientific Board, Banco Sabadell, Postdoctoral Grants
- Scientific Board, Science Foundation Ireland, Postdoctoral Grants
- Accreditation Catedrático de Universidad (National Agency for Accreditation and Quality Evaluation, Spain, ANECA); Profesor Titular de Universidad (ANECA); Profesor Contratado Doctor (ANECA); Profesor de Universidad Privada (ANECA); Profesor Ayudante Doctor (ANECA)
- Accreditation I3 (Programa de Incentivación de la Incorporación e Intensificación de la Actividad Investigadora, Ministry of Science and Education, Spain)
- Scientific Board, Fundación Mari Paz Jimenez (<http://fundacionmaripazjimenez.org/>) (2017-2022)
- Scientific Board, Photonics Based Sensing ERA-NET (<https://photonicsensing.eu/category/news/>)

Visiting Appointments

- Invited Professor, Université Paris-Descartes, France, 2017
- Invited Professor, Nanyang Technological University, Singapore, 2015
- Invited Professor, Philipps-Universität Marburg, Marburg, Germany, 2012
- Invited Professor, Universität Bayreuth, Bayreuth, Germany, 2011
- Invited Professor, Universidad Autónoma de México, Ensenada, BC, Baja California, 2026

Funding and Grants (51)

Principal Investigator

38- Universal Optical Sensing through Surface Selection Rules and AI in Optical Tongues/Noses. Proyectos de Generación de Conocimiento 2023. *Agencia Estatal de Investigación* (PID2023-152767NB-I00) 2024-2027 (176,096 €)

37- Contratos predoctorales para la formación de doctores Joan Oro. *Generalitat de Catalunya* (2023 FI-1 00205) 2023-2026 (103,096 €)

36- Optical reactive strips for multiplex screening of infectious diseases. *Ministerio de Ciencia e Innovacion* (PDC2021-121787-I00) 2021-2022 (130,200 €)

35- Contratos predoctorales para la formación de doctores FPI. *Ministerio de Ciencia e Innovacion* (PRE2021-099040) 2022-2026 (100,860 €)

34- Contrato posdoctoral Margarita Salas. *Ministerio de Ciencia e Innovacion* 2022-2025 (123,529 €)

33- Programa de suport als grups de recerca reconeguts 2022. *Universitat Rovira i Virgili* (2022PFR-URV-B2-02) 2022 (9,321 €)

32- Integral staging, prognostic and diagnostic of cancer in liquid samples through optical methods. *Ministerio de Ciencia e Innovacion* (PID2020-120306RB-I00) 2021-2024 (271,281 €)

31- Programa de suport als grups de recerca reconeguts 2018. *Universitat Rovira i Virgili* (2018PFR-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-2017-02082) 2017-2019 (184,288.28 €)

23- Plasmonic nanoprobe to detect disease biomarkers *European Union-TECNIO SPRING (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 Economía y Competitividad (CTQ2014-59808R)* 2014-2017 (164,860 €)

21- Fase 3, Desenvolupament de nous sensors òptics per a diagnostics i biodetecció *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 òptics per a diagnostics i biodetecció *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 òptics per a diagnostics i biodetecció *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 Catalunya (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-TECNIO SPRING* 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 Economía y Competitividad* 2012-2014 (1,416,023 €)

5-Detección Universal de proteínas mediante sistemas de sensores ópticos de reactividad cruzada *Ministerio de Economía 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 Economía 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; **Matter**; Mater Sci Eng B; **Nano Lett**; Nano Research; Nanoscale; **Nature**; **Nat Comm.**; **Nat Mater**; **Nat Nanotech**; **Nat Protocols**; Sci Rep; Oncotarget; Optic Express; Org Geochem; PCCP; Physica B; React Funct Polym; RSC Advances; **Science**; **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, 2025
- **BIOS+. SPIE Photonics West.** San Francisco, CA, USA, 2024
- **BIOS+. SPIE Photonics West.** San Francisco, CA, USA, 2023
- **BIOS+. SPIE Photonics West.** San Francisco, CA, USA, 2022
- **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: 11.556, <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, <https://chemistry-europe.onlinelibrary.wiley.com/journal/26292742>) 2020-...
- Editorial Advisory Board, **Interdisciplinary Medicine** (Wiley-VCH, <https://onlinelibrary.wiley.com/journal/28326245>) 2022-...
- Guest Editor, **Journal of Optics** (IF: 2.516, 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
- Special Editor, **Applied Materials Today** (IF: 10.041, 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, <https://pubs.rsc.org/en/journals/articlecollectionlanding?sercode=nr&themeid=05796a1d-36e3-49ae-9790-a5b86c2f17ef>) 2020-2021
- Guest Editor, **Advanced Materials Interfaces** (IF: 5.4; <https://onlinelibrary.wiley.com/journal/21967350> Themed Issue on Advances in Plasmonics and Its Applications) 2023-2025
- Guest Editor, **npj Biosensing** (Global Health Diagnostics – Addressing Animal and Crop Health, <https://www.nature.com/collections/fbcigieich>) 2024-2025

Grant Review

- European Research Council
- La Caixa Foundation
- Science Foundation Ireland (SFI)
- Austrian Science Fund (FWF)
- 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 Tecnológico 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*. 2009-2011
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

Graduate (MSc/PhD) Students

- **Irene Calderon Gonzalez:** PhD (in progress)
- **Gianfranco Terrones:** PhD (in progress)
- **Irving Brian Becerril Castro:** PhD (in progress)

Postgraduate Scholars

- **Dr Nicolas Pazos-Perez** (2013-...)
- **Dr Luca Guerrini** (2012-...)
- **Dr Yoel Negrin-Montecelo** (2022-...)
- **Dr Burak Ozdemir** (2024-...)

Alumni

- **Brian Becerril Castro PhD** (2026) “Development of sustainable and highly controlled plasmonic materials” -summa cum laude
- **Tolga Zorlu:** PhD (2023) “Advanced Plasmonic Nanosensors for the SERS Ultradetection of Non-Conventional Analytes” -summa cum laude
- **Maria Cristina Turino:** PhD (2022) “Engineering Plasmonic Nanomaterials for SERS Applications” -summa cum laude
- **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)

- **Irene Calderon Gonzalez:** MSc (2021)
- **Anastasia Nenashkina:** MSc (2020)
- **Arianna Fabris:** MSc (2020)
- **Xiaotong Feng:** MSc (2016)
- **Cristina Anaya:** MSc (2015)
- **Patricia Gisbert-Quilis:** MSc (2015)
- **Manuel Garcia Algar:** MSc (2014)
- **Anna Trojanowska:** MSc (2014)
- **Judit Morlà Folch:** MSc (2014)
- **Ignacio Rodriguez Loureiro:** MSc (2013)
- **Elena Alfaya:** MSc (2013)
- **Dionisia Tsoutsi:** MSc (2011)
- **Silvia Fernandez Vazquez:** MSc (2011)
- **Sara Abalde Cela:** DEA (2010)
- **Marcos Sanles Sobrido:** DEA (2009)
- **Laura Rodriguez Lorenzo:** DEA (2009)

- **Dr. Yoel Negrin Montecelo** (2022-2025)
- **Dr. Luca Guerrini** (2012/2022)
- **Dr. Nicolas Pazos-Perez** (2014/2021)
- **Dr Maria Blanco Formoso** (2019/2020)
- **Dr Neus Feliu Torres** (2017/2019)
- **Dr Elena Pazos** (2014/17)
- **Dr Moritz Nazareus** (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** (2006/07)
- **Dr Sheng Dai** (2006/07)
- **Dr Herman High** (2006/07)
- **Dr Rolando Perez-Piñeiro** (2006/07)

PUBLICATIONS

Peer reviewed publications: 228

Number of citations: 26682 (2025 Citations: 2576) **h-index:** 82/**m-index:** 3.7

ISI highly cited/hot papers: 61

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: 29



***Corresponding author**

229- Z. Zhou , N. Sun , N. Tverdokhleba , A. Movsesyan , A. Steiner , P. Probst , V. Gupta , B. Yin , N. Pazos-Perez , **R.A. Alvarez-Puebla**, M. Hofmaier , M. Müller , H. Merlitz , O. Guskova , Y. Yingling , F. Lissel , T. König , Z. Wang , A. Govorov , N.A. Kotov, A. Fery Highly efficient and reversible chirality transfer between protein and achiral plasmonic assemblies *Nature Materials* (2026) accepted

228- Syed Shoaib Ahmad Shah, Jamal Kazmi, Muhammad Nazir, Manzar Sohail, Muhammad Sufyan Javed, Tayyaba Najam, Lishan Peng, **Ramon Alvarez-Puebla*** Synergistic Ni Single-Atom–Nanoparticle Interfaces for Poison-resistant CO₂ Electroreduction *Chemical Engineering Journal* (2026) 527(1), 172062. DOI: <https://doi.org/10.1016/j.cej.2025.172062>

227- Irene Calderón González, Robbert Schuett, Gerwin Chilla, Florian Schulz, Zhiming Wang, Wolfgang J Parak, **Ramon A Alvarez-Puebla*** One-Shot SERRS Detection of Iron and Acidity in Aqueous Systems *ACS Applied Materials & Interfaces* (2026). DOI: <https://doi.org/10.1021/acsami.5c22602>

226- M.A. Correa-Duarte, I.B. Becerril-Castro, **R.A. Alvarez-Puebla***. The Role of Porosity in SERS. *Adv Opt Mater* (2025) e01376. DOI: 10.1002/adom.202501376. <https://doi.org/10.1002/adom.202501376>

225- Yoel Negrín-Montecelo, Ana Sousa-Castillo, Noel Cardeñoso-Garrido, Lucía Guillade, Lucas V. Besteiro, Margarita Vázquez-González, **Ramón A. Alvarez-Puebla**, Begoña Puértolas, Miguel A. Correa-Duarte *Plasmon-Driven Nitrogen Photoreduction to Ammonia Using Silica-Encapsulated Au Nanostar/TiO₂ Nanohybrids* *Adv Energy Mater* (2025) 15, 2501526. <https://doi.org/10.1002/aenm.202501526>

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- Invited Book Chapter

170- A. Alba-Patiño, S.M. Russell, M. Borges, N. Pazos-Pérez, **R.A. Alvarez-Puebla,*** R. Rica* *Nanoparticle-Based Mobile Biosensors for the Rapid Detection of Sepsis Biomarkers in Whole Blood.* **Nanoscale Advances** (2020) 2, 1253–1260 (DOI: [10.1039/D0NA00026D](https://doi.org/10.1039/D0NA00026D))

169- J. Langer, D. Jimenez de Aberasturi, J. Aizpurua, **R.A. Álvarez-Puebla**, B. Auguie, J.J. Baumberg, Guillermo C Bazan, S.E.J. Bell, A. Boisen, A.G. Brolo, J. Choo, D. Cialla-May, V. Deckert, L. Fabris, K. Faulds, F.J. García de Abajo, R. Goodacre, D. Graham, A.J. Haes, C.L. Haynes, C. Huck, T. Itoh, M. Käll, J. Kneipp, N.A. Kotov, H. Kuang, E.C. Le Ru, H. Kwee Lee, J.-F. Li, X.Y. Ling, S. Maier, T. Mayerhoefer, M. Moskovits, K. Murakoshi, J.-M. Nam, S. Nie, Y. Ozaki, I. Pastoriza-Santos, J. Perez-Juste, J. Popp, A. Pucci, S. Reich, B. Ren, G.C. Schatz, T. Shegai, S. Schlücker, L.L. Tay, K.G. Thomas, Z.-Q. Tian, R.P. Van Duyne, T. Vo-Dinh, Y. Wang, K.A. Willets, C. Xu, H. Xu, Y. Xu, Y.S. Yamamoto, B. Zhao, L.M. Liz-Marzán* *Present and Future of Surface Enhanced Raman Scattering* **ACS Nano** (2020) 14, 28-117 (<https://doi.org/10.1021/acsnano.9b04224>)

- **Editors' Choice ACS Nano**
- **Most Read article of ACS Nano 2020**
- **Most cited article of ACS Nano 2020**
- **ISI Highly cited (Chemistry)/ISI Hot Paper (Chemistry).**

168- M. Blanco-Formoso, A. Sousa-Castillo, X. Xiao, A. Mariño-Lopez, M. Turino, N. Pazos-Perez, V. Giannini,* M.A. Correa-Duarte,* **R.A. Álvarez-Puebla*** *Boosting the analytical properties of gold nanostars by single particle confinement into Yolk porous silica shells* **Nanoscale** (2019) 11, 21872-21879 (<https://doi.org/10.1039/C9NR07889D>)

167- L. Guerrini, **R.A. Álvarez-Puebla,*** *Surface-enhanced Raman spectroscopy (SERS) characterisation of abasic sites in DNA duplexes* **Analyst** (2019) 144, 6862-6865 (<https://doi.org/10.1039/C9AN02040C>)

166- L. Guerrini, **R.A. Álvarez-Puebla*** *Surface-enhanced Raman spectroscopy in cancer diagnosis, prognosis and monitoring* **Cancers** (2019) 1(6), 748 (DOI: 10.3390/cancers11060748)

165- L. Guerrini, **R.A. Álvarez-Puebla,*** *Multiplex SERS Chemosensing of Metal Ions via DNA-Mediated Recognition* **Analytical Chemistry** (2019) 18, 11778-11784 (DOI: 10.1038/s41467-019-09939-8)

164- G.C. Phan-Quang, X. Han, C.S.L. Koh, H.Y.F. Sim, C.L. Lay, S.X. Leong, Y.H. Lee, N. Pazos-Perez, **R.A. Álvarez-Puebla,*** X.Y. Ling* *3D SERS Platforms: Large-scale Plasmonic Hotspots for New Applications in Sensing, Microreaction and Data Storage* **Accounts of Chemical Research** (2019) 7, 1844-1854 (DOI: 10.1021/acs.accounts.9b00163)

163- S.J. Palmer, X. Xiao, N. Pazos-Perez, L. Guerrini, M.A. Correa-Duarte, S.A. Maier, R.V. Craster, **R.A. Álvarez-Puebla**, V. Giannini* *Extraordinarily transparent compact metallic metamaterials* **Nature Communications** (2019) 10, 2118 (DOI: 10.1038/s41467-019-09939-8)

162- C. Carrillo-Carrión, R. Martínez, M.F. Navarro Poupard, B. Pelaz, E. Polo, A. Olgiati, P. Taboada, M.G. Soliman, A. Arenas-Vivo, U. Catalán, S. Fernández-Castillejo, R. Solà, W. Parak, P. Horcajada,* **R.A. Álvarez-Puebla,*** Pablo del Pino* *Aqueous Stable Gold Nanostar/ZIF-8 Nanocomposites for Light Triggered Release of Active Cargo Inside Living Cells* **Angewandte Chemie International Edition** (2019) 58, 7078-7082 (DOI: 10.1002/anie.201902817)

161- A. Mariño-López, M. Blanco-Formoso, L. Furini, A. Sousa-Castillo, E. Tiryaki, M. Pérez-Lorenzo, M. Testa-Anta, V. Salgueiriño, N.A. Kotov,* **R.A. Álvarez-Puebla,*** M.A. Correa-Duarte,* *Spontaneous Formation of Cold-Welded Plasmonic Nanoassemblies with Refracted Shapes for Intense Raman Scattering* **Langmuir** (2019) 35, 11, 4110-4116 (DOI: 10.1021/acs.langmuir.9b00234)

160- N. Pazos-Perez*, J.M. Fitzgerald, V. Giannini, L. Guerrini, **R.A. Álvarez-Puebla*** *Modular assembly of plasmonic core-satellite structures as highly brilliant SERS-encoded nanoparticles* **Nanoscale Advances** (2019) 1, 122-131 (DOI: 10.1039/C8NA00257F)

- **Invited Paper**
- **Journal Cover (January 2018, Vol. 1, Issue 1)**

159- A. Mariño-López, A. Sousa-Castillo, E. Carbó-Argibay, F. Otero-Espinar, **R. A. Álvarez-Puebla,*** M. Pérez-Lorenzo,* M. A. Correa-Duarte,* *Laser-protective soft contact lenses: Keeping an eye on the eye through plasmonics* ***Applied Materials Today*** (2019) 15, 1–5 (DOI: 10.1016/j.apmt.2018.12.016)

- **Invited Paper**

158- A. Mariño-Lopez, A. Sousa-Castillo, M. Blanco-Formoso, L.N. Furini, L. Rodríguez-Lorenzo, N. Pazos-Perez, L. Guerrini, M. Pérez-Lorenzo, M.A. Correa-Duarte,* **R.A. Álvarez-Puebla*** *Microporous plasmonic capsules as stable molecular sieves for direct SERS quantification of small pollutants in natural waters* ***ChemNanoMat*** (2019) 5, 46–50 (DOI: 10.1002/cnma.20180035)

- **Highlighted in Chemistry Views.**

157- N. Pazos-Perez,* **R.A. Álvarez-Puebla*** *Plasmonic Macroscopic Structures: from linear assemblies to 3D structured super-crystals* ***Journal of Physics*** (2018) 1092, 012113 (DOI: 10.1088/1742-6596/1092/1/012113)

- **Invited Paper**

156- L. Guerrini, **R.A. Álvarez-Puebla,*** N. Pazos-Perez* *Surface modifications of nanoparticles for stability in biological fluids* ***Materials*** (2018) 11, Art: 1154, (1–28 pp) (DOI: 10.3390/ma11071154)

- **Invited Review**

155- **R.A. Álvarez-Puebla,*** N. Pazos-Perez, L. Guerrini.* *SERS/Fluorescent Encoded Particles as Dual-mode Optical Probes* ***Applied Materials Today*** (2018) 13, 1–14 (DOI: 10.1016/j.apmt.2018.07.007)

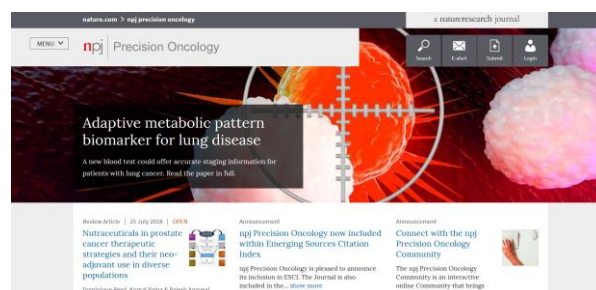
- **Invited Review**

153- N. Pazos-Perez,* **Ramon Alvarez-Puebla*** *Plasmon Tunability of Gold Nanostars at the Tip Apexes* ***ACS Omega*** (2018) 3, 17173–17179 (DOI : 10.1021/acsomega.8b02686)

- **Invited Paper**

152- M. Garcia-Algar, A. Fernandez-Carrascal, L. Guerrini, N. Feliu, W.J. Parak, R. Guimera,* E. Garcia-Rico,* **R.A. Álvarez-Puebla*** *Metabolic liquid biopsy for the disease monitoring in lung cancer* ***npj Precision Oncology*** (2018) 2, Art: 16 (1–10 pp) (DOI: 10.1038/s41698-018-0059-9)

- **Featured at the *npj Precision Oncology* website.**



151- I. Chakraborty, D. Jimenez de Aberasturi, N. Pazos-Perez, L. Guerrini, A. Masood, **R.A. Álvarez-Puebla, N. Feliu, W.J. Parak*** *Ion-Selective Ligands: How Colloidal Nano- and Micro-Particles Can Introduce New Functionality* ***Zeitschrift für Physikalische Chemie*** (2018) 232, 1307–1317 (DOI: 10.1515/zpch-2018-1172)

150- E. Garcia-Rico, **R.A. Álvarez-Puebla,*** L. Guerrini,* *Direct surface-enhanced Raman scattering (SERS) spectroscopy of nucleic acids: from fundamental studies to real-life applications* ***Chemical Society Reviews*** (2018) 47, 4909–4923 (DOI: 10.1039/C7CS00809K)

- **Invited Review**

149- E. Polo, M.F. Navarro Poupard, L. Guerrini, P. Taboada, B. Pelaz, **R.A. Álvarez-Puebla,*** P. del Pino* *Colloidal Bioplasmonics* ***Nano Today*** (2018) 20, 58–73 (doi.org/10.1016/j.nantod.2018.04.003)

148- S. Jessl, M. Tebbe, L. Guerrini, A. Fery, **R.A. Álvarez-Puebla,*** Nicolas Pazos-Perez* *Silver-assisted synthesis of gold nanorods: the relation between silver additive and iodide impurities* ***Small*** (2018) 14, 1703879 (1–12 pp). (doi.org/10.1002/smll.201703879)

147-M Sivils,* N Pazos-Perez, R Yu, **R.A. Alvarez-Puebla**, F de Abajo, C Ropers *Continuous-Wave Multiphoton Photoemission from Plasmonic Nanostars* ***Communications Physics*** (2018) 1, Art 13 (1-6 pp) (doi:10.1038/s42005-018-0014-7)

- **Editors' pick** ***Communications Physics***

146-L. Rodríguez-Lorenzo, R. de la Rica, **R.A. Álvarez-Puebla**, L.M. Liz-Marzán, M.M. Stevens* *Addendum: Plasmonic nanosensors with inverse sensitivity by means of enzyme-guided crystal growth* ***Nature Materials*** (2018) 17, 205–207 (DOI:10.1038/nmat5069)

145- E. Garcia Rico, L. Guerrini, **R.A. Alvarez-Puebla*** *The role of nanoscience in cancer diagnosis* in ***Handbook of Nanomaterials for Cancer Theranostics*** (J. Conde, Ed.) Elsevier (2018) Chapter 7, 177-197 (ISBN: 978-0-12-813339-2) (DOI: 10.1016/B978-0-12-813339-2.00007-4)

- **Invited Book Chapter**

144-C. Catala, N. Pazos-Perez, L. Guerrini, **R.A. Alvarez-Puebla*** *SERS methods for diagnosis of infectious diseases* in ***Nanotechnologies in Preventive and Regenerative Medicine*** (D.P. Uskokovic Ed.) Elsevier (2018) Chapter 1.3, 1-92 (ISBN: 9780323480635) (DOI: 10.1016/B978-0-323-48063-5.00001-0)

- **Invited Book Chapter**

143-E. Pedrol, J. Martínez, F. Díaz, M. Aguiló, M. Garcia-Algar, M. Nazarenus, L. Guerrini, E. Garcia-Rico, **R.A. Alvarez-Puebla**,* J. Massons* *Microfluidic device with dual-channel fluorescence acquisition for quantification/identification of cancer cells* ***Microfluidics and Nanofluidics*** (2017) 21, 181 (10 pp) (DOI: 10.1007/s10404-017-2015-3)

142- L. Guerrini; N. Pazos-Perez; E. Garcia-Rico; **R.A. Alvarez-Puebla*** *Cancer characterization and diagnosis with SERS-encoded particles* ***Cancer Nanotechnology*** (2017) 8, 5 (24 pp) (DOI: 10.1186/s12645-017-0031-3)

- **Invited Review**

141-N. Feliu,* M. Hassan, E. Garcia-Rico, D. Cui, W. Parak, **R.A. Alvarez-Puebla*** *SERS quantification and characterization of proteins and other biomolecules* ***Langmuir*** (2017) 33, 9711–9730 (DOI: 10.1021/acs.langmuir.7b01567)

- **Invited Review**

140-L. Guerrini, E. Garcia-Rico, N. Pazos-Perez, **R.A. Alvarez-Puebla*** *Smelling, Seeing, Tasting—Old Senses for New Sensing* ***ACS Nano*** (2017) 11, 5217–5222 (DOI: 10.1021/acsnano.7b03176)

- **Invited Perspective**

139-E. Pedrol, M. Garcia-Algar, J. Massons, M. Nazarenus, L. Guerrini, J. Martínez, A. Rodenas, A. Fernandez-Carrascal, M. Aguiló, L.G. Estevez, I. Calvo, A. Olano-Daza, E. Garcia-Rico, F. Díaz, **R.A. Alvarez-Puebla*** *Optofluidic device for the quantification of circulating tumor cells in breast cancer* ***Scientific Reports*** (2017) 7, 3677 (DOI:10.1038/s41598-017-04033-9)

138-P. Gisbert-Quilis, M. Masetti, J. Morla-Folch, J. Fitzgerald, N. Pazos-Perez, E. Garcia-Rico, V. Giannini, **R.A. Alvarez-Puebla**,* L. Guerrini* *The Structure of Short and Genomic DNA at the Interparticle Junctions of Cationic Nanoparticles* ***Advanced Materials Interfaces*** (2017) 4, 1700724 (1 of 10) (DOI: 10.1002/admi.201700724)

- **Journal Cover** (September 2017, Vol. 4, Issue 17)

137- G.C. Phan-Quang, E. H. Zi Wee, F. Yang, H. Kwee Lee, I.Y. Phang, X. Feng, **R.A. Alvarez-Puebla**,* X.Y. Ling* *On-line Flowing Colloidosomes: Seamless Sequential Multi-analyte and High-throughput SERS Analysis* ***Angewandte Chemie International Edition*** (2017) 56, 5565-5569 (DOI: 10.1002/anie.201702374)

136- A. Le Beulze; S. Gomez-Graña; H. Gehan; S. Mornet; S. Ravaine; M. Correa-Duarte; L. Guerrini; **R.A. Alvarez-Puebla**; E. Duguet,* E. Pertreux; A. Crut; P. Maioli; F. Vallée; N. Del Fatti; O. Erseng; M. Treguer-Delapierre *Robust raspberry-like metallo-dielectric nanoclusters of critical sizes as SERS substrates* **Nanoscale** (2017) 9, 5725-5736 (DOI: 10.1039/C7NR00969K)

135- N. Feliu, X. Sun, **R.A. Alvarez-Puebla**, W.J. Parak* *Quantitative particle-cell interaction - about some basic physicochemical pitfalls* **Langmuir** (2017) 33, 6639-6646 (DOI: 10.1021/acs.langmuir.6b04629)

- **Invited Feature paper**
- **Journal Cover (July 2017, Vol. 33, Issue 27)**

134- A. Fernandez-Carrascal, M. Garcia-Algar, M. Nazarenus, A. Torres-Nuñez, L. Guerrini, N. Feliu, W.J. Parak, E. Garcia-Rico, **R.A. Alvarez-Puebla*** *Metabolic pathway for the universal fluorescent recognition of tumor cells* **Oncotarget** (2017) 8, 76108-76115 (DOI: 10.18632/oncotarget.18551)

133- A. Shavel, L. Guerrini, **R.A. Alvarez-Puebla*** *Colloidal Synthesis of Silicon Nanoparticles in Molten Salts* **Nanoscale** (2017) 9, 8157-8163 (DOI: 10.1039/C7NR01839H)

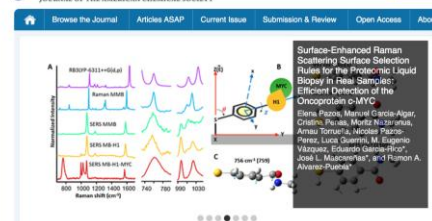
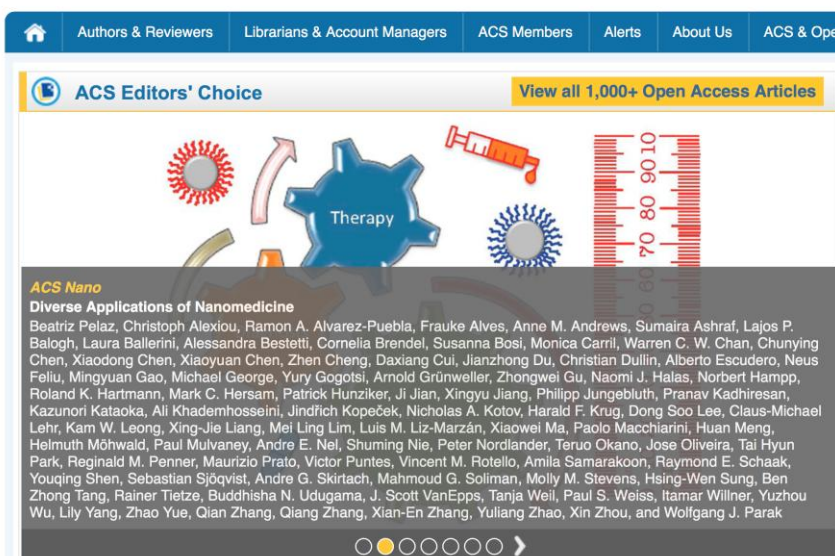
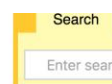
132- B. Pelaz, C. Alexiou, **R.A. Alvarez-Puebla**, F. Alves, A.M. Andrews, S. Ashraf, L.P. Balogh, L. Ballerini, A. Bestetti, C. Brendel, S. Bosi, M. Carril, W.C.W. Chan, C. Chen, X. Chen, X. Chen, Z. Cheng, D. Cui, J. Du, C. Dullin, A. Escudero, N. Feliu, M. Gao, M. George, A. Gruanweller, Z. Gu, Y. Gogotsi, N. Halas, N. Hampp, R.K. Hartmann, M.C. Hersam, P. Hunziker, J. Jian, X. Jiang, P. Jungebluth, P. Kadhiresan, K. Kataoka, A. Khademhosseini, J. Kopecek, N.A. Kotov, H.F. Krug, D.S. Lee, C.-M. Lehr, K.W. Leong, X.-J. Liang, M. Lim, L.-M. Liz-Marzan, X. Ma, P. Macchiarini, H. Meng, H. Moehwald, P. Mulvaney, A.E. Nel, S. Nie, P. Nordlander, T. Okano, J. Oliveira, T.H. Park, R.M. Penner, M. Prato, V. Puentes, V. Rotello, A. Samarakoon, R.E. Schaak, Y. Shen, S. Sjöqvist, A.G. Skirtach, M.G. Soliman, M.M. Stevens, B.Z. Tang, R. Tietze, S. VanEpps, B.N. Udugama, H.-W. Sung, T. Weil, P.S. Weiss, I. Willner, Y. Wu, L. Yang, Z. Yue, Q. Zhang, Q. Zhang, X.-E. Zhang, Y. Zhao, X. Zhou, W.J. Parak, *Diverse Applications of Nanomedicine* **ACS Nano** (2017) 11, 2313-2381 (DOI: 10.1021/acsnano.6b06040)

- **Invited ACS Nano Focus**
- **Most Read article of ACS Nano 2017**
- **Selected as ACS Editors' Choice.**
- **ISI Highly cited (Chemistry)/ISI Hot Paper (Chemistry).**

131- J. Morla-Folch, P. Gisbert-Quilis, M. Masetti, E. Garcia-Rico, **R.A. Alvarez-Puebla**,* L. Guerrini *Conformational SERS Classification of K-Ras Point Mutations for Cancer Diagnostics* **Angewandte Chemie International Edition** (2017) 56, 2381-2385 (DOI: 10.1002/anie.201611243 and 10.1002/ange.201611243)

- **Journal Cover (February 2017 Vol. 56, Issue 9)**

130- E. Pazos, M. Garcia-Algar, C. Penas, M. Nazarenus, A. Torruella, N. Pazos-Perez, L. Guerrini, M.E. Vázquez, E. Garcia-Rico,* J.L. Mascareñas,*



R.A. Alvarez-Puebla* *Surface-enhanced Raman scattering surface selection rules for the proteomic liquid biopsy in real samples. Efficient detection of the oncoprotein c-MYC* ***Journal of the American Chemical Society*** (2016) 138, 14206–14209, (DOI: 10.1021/jacs.6b08957)

- **Featured at the ACS JACS website.**

129- C. Catala, B. Mir-Simon, X. Feng, C. Cardozo, N. Pazos-Perez, E. Pazos, S. Gómez-de Pedro, L. Guerrini, A. Soriano, J. Vila, F. Marco, E. Garcia-Rico, **R.A. Alvarez-Puebla,*** *Online SERS quantification of Staphylococcus aureus and the application to diagnostics in human fluids* ***Advanced Materials Technologies*** (2016) 1, 1600163, (9pp) (DOI: 10.1002/admt.201600163)

- **Journal Cover (November 2016 Vol. 1, Issue 7)**

128- J. Morla-Folch, **R.A. Alvarez-Puebla,*** L. Guerrini* *Direct Quantification of DNA Base Composition by Surface-enhanced Raman Scattering Spectroscopy.* ***Journal of Physical Chemistry Letters*** (2016) 7, 3037–3041 (DOI: 10.1021/acs.jpcllett.6b01424)

127- A. Torres-Nuñez, K. Faulds, D. Graham, **R.A. Alvarez-Puebla*** L. Guerrini.* *Silver Colloids as Plasmonic Substrates for Direct Label-free Surface-enhanced Raman Scattering Analysis of DNA.* ***Analyst*** (2016) 141, 5170–5180 (DOI: DOI: 10.1039/C6AN00911E)

- **Invited Paper-“Surface-enhanced Raman scattering” special issue**

126- N. Pazos-Perez, E. Pazos, C. Catala, B. Mir-Simon, S. Gomez-de-Pedro, J. Sagales, C. Villanueva, J. Vila, A. Soriano, F. J. García de Abajo,* **R. A. Alvarez-Puebla*** *Ultrasensitive multiplex optical quantification of bacteria in large samples of biofluids* ***Scientific Reports*** (2016) 6:29014 (DOI: 10.1038/srep29014)

125- J. Morla-Folch, H. Xie, **R.A. Alvarez-Puebla,*** L. Guerrini* *Surface-enhanced Raman Scattering (SERS) Spectroscopy of RNA* ***ACS Nano*** (2016) 10, 2834–2842 (DOI: 10.1021/acsnano.5b07966)

124- M. Tebbe, S. Lentz, L. Guerrini, A. Fery, **R.A. Alvarez-Puebla,*** N. Pazos-Perez *Fabrication and optical enhancing properties of discrete supercrystals* ***Nanoscale*** (2016) 8, 12702–12709 (DOI: 10.1039/C5NR09017B)

- **Journal Cover (July 2016 Vol. 8, Issue 25)**

123- J.M. Romo-Herrera,* A.L. González-Ronquillo, L. Guerrini, F.R. Castiello, G. Alonso-Nuñez, O.E. Contreras, **R.A. Alvarez-Puebla*** *Study of Depth and Size of Concave Cube Au Nanoparticles as Highly Sensitive SERS Probes* ***Nanoscale*** (2016) 8, 7326–7333 (DOI: 10.1039/C6NR01155A)

122- J. Morla-Folch, H. Xie, P. Gisbert-Quilis, S. Gómez-de Pedro, N. Pazos-Perez, **R.A. Alvarez-Puebla,*** L. Guerrini* *Ultrasensitive Direct Quantification of Nucleobase Modifications in DNA by Surface-enhanced Raman Scattering: The Case of Cytosine* ***Angewandte Chemie International Edition*** (2015) 54, 13650–13654 (DOI: 10.1002/anie.201507682 and 10.1002/ange.201507682)

- **Highlighted as Wiley-VCH Hot Topic**
- **Highlighted in European Journal of Organic Chemistry**

121- A. Trojanowska, N. Pazos-Perez, C. Panisello, T. Gumi, L. Guerrini,* **R. A. Alvarez-Puebla*** *Plasmonic-polymer Hybrid Hollow Microbeads for Surface-enhanced Raman Scattering (SERS) Ultradetection* ***Journal of Colloid and Interface Science*** (2015) 460, 128–134 (DOI: 10.1016/j.jcis.2015.08.047)

120- **R.A. Alvarez-Puebla,*** X.Y. Ling, P. Candeloro, M. Lamy de la Chapelle *Special Issue on SERS* ***Journal of Optics*** (2015) 17, 110201 (3pp) (DOI:10.1088/2040-8978/17/11/110201)

119-B. Mir-Simon, J. Morla-Folch, P. Gisbert-Quilis, N. Pazos-Perez, H. Xie; N. Bastus, V. Puentes, **R.A. Alvarez-Puebla**, L. Guerrini* *SERS Efficiencies of Micrometric Polystyrene Beads Coated with Gold and Silver Nanoparticles: The Effect of Nanoparticle Size* ***Journal of Optics*** (2015) 17, 114012 (9pp) (DOI:10.1088/2040-8978/17/11/114012)

- **Invited Paper- "Special Issue on SERS"**

118-L. Guerrini, R. Arenal, B. Mannini, F. Chiti, R. Pini, P. Matteini, **R.A. Alvarez-Puebla*** *SERS Detection of Amyloid Oligomers on Metallorganic-decorated Plasmonic Beads* ***ACS Applied Materials & Interfaces*** (2015) 7, 9420–9428 (DOI: 10.1021/acsami.5b01056)

117-M.A. Correa-Duarte,* N. Pazos-Perez, L. Guerrini, V. Giannini, **R.A. Alvarez-Puebla*** *Boosting the Quantitative Inorganic Surface-enhanced Raman Scattering Sensing to the Limit: The Case of the Nitrite/Nitrate Detection* ***Journal of Physical Chemistry Letters*** (2015) 6, 864-874 (DOI: 10.1021/acs.jpcclett.5b00115)

116-B. Mir-Simon, I. Reche-Perez, L. Guerrini, N. Pazos-Perez, **R.A. Alvarez-Puebla*** *Universal One-pot and Scalable Synthesis of SERS Encoded Nanoparticles* ***Chemistry of Materials*** (2015) 27, 950–958 (DOI: 10.1021/cm504251h)

115-M. Masetti, H. Xie, Z. Krpetic, M. Recanatini, **R.A. Alvarez-Puebla**,* L. Guerrini* *Revealing DNA interactions with exogenous agents by SERS* ***Journal of the American Chemical Society*** (2015) 37, 469-476 (DOI: 10.1021/ja511398w)

114-L. Guerrini,* Ž. Krpetić, D. van Lierop, **R.A. Alvarez-Puebla**, D. Graham *Direct Surface-enhanced Raman Scattering Analysis of DNA Duplexes* ***Angewandte Chemie International Edition*** (2015) 54, 1144-1148 (DOI: 10.1002/anie.201408558)

- **ISI Highly cited (Chemistry).**
- **Highlighted as Wiley-VCH Hot Topic**

113-F. Petronella, M.L. Curri, M. Striccoli, C. Mateo-Mateo, **R. A. Alvarez-Puebla**, M.A. Correa-Duarte,* R. Comparelli* *Direct growth of shape controlled TiO₂ nanocrystals onto SWCNTs for highly active photocatalytic materials in the visible* ***Applied Catalysis B: Environmental*** (2015) 178, 91-99 (DOI: 10.1016/j.apcatb.2014.10.030)

112-M. Tebbe, M. Maennel, A. Fery, N. Pazos-Perez, **R.A. Alvarez-Puebla*** *Organized solid thin films of gold nanorods with different sizes for SERS applications* ***Journal of Physical Chemistry C*** (2014) 118, 28095–28100 (DOI: 10.1021/jp5086685)

111-J. Morla-Folch, L. Guerrini, N. Pazos-Perez, R. Arenal, **R.A. Alvarez-Puebla*** *Synthesis and optical properties of homogeneous nanoshurikens* ***ACS Photonics*** (2014) 1, 1237–1244 (DOI: 10.1021/ph500348h)

- **Between the Most-Read Articles of the year (October-December, 2014) in *ACS Photonics***

110-R. Fenollosa, E. Garcia-Rico, S. Alvarez, R. Alvarez, X. Yu, I. Rodriguez, S. Carregal-Romero, C. Villanueva, Manuel Garcia-Algar, P. Rivera-Gil, A.R. de Lera, W.J. Parak,* F. Meseguer,* **R.A. Alvarez-Puebla*** *Silicon nanoparticles as Trojan horses for potential cancer therapy* ***Journal of Nanobiotechnology*** (2014) 12:35 (DOI: 10.1186/s12951-014-0035-7)

- **Invited paper**
- **Between the Most-Read Articles of the year 2014-2015 in *Journal of Nanobiotechnology***

109-L. Guerrini,* I. Rodriguez-Loureiro, M.A. Correa-Duarte, Y.H. Lee, X.Y. Ling, F.J. García de Abajo, **R.A. Alvarez-Puebla*** *Chemical Speciation of Heavy Metals by Surface-enhanced Raman Scattering Spectroscopy: Identification and Quantification of Inorganic- and Methyl-Mercury in Water* ***Nanoscale*** (2014) 6, 8368-8375 (DOI: 10.1039/C4NR01464B)

108-M. Tebbe, P. Cherepanov, E.V. Skorb, S.K. Poznyak, J. García de Abajo, A. Fery, D.V. Andreeva, R. A. Alvarez-Puebla, N. Pazos-Perez* *SERS Platforms of Plasmonic Hydrophobic Surfaces for Analyte concentration: Hierarchically Assembled Gold Nanorods on Anodized Aluminum* ***Particle & Particle Systems Characterization*** (2014) 31, 1134-1140 (DOI: 10.1002/ppsc.201400062)

- **Journal Cover (November 2014 Vol. 31, Issue 11).**

107-I. Rodriguez, Lei Shi, B.A. Korgel, R.A. Alvarez Puebla,* F. Meseguer* *Silicon nanoparticles as Raman scattering enhancers* ***Nanoscale*** (2014) 6, 5666-5670 (DOI: 10.1039/c4nr00593g)

106-L. Rodriguez-Lorenzo,* R.A. Alvarez-Puebla* *Surface-enhanced Raman scattering (SERS) nanoparticle sensors for biochemical and environmental sensing* ***Nanosensors for chemical and biological applications: Sensing with nanotubes, nanowires and nanoparticles*** (2014) 197-230 (DOI: 10.1533/9780857096722.2.197)

- **Invited paper**

105-S. Abalde-Cela, C. Abell, R.A. Alvarez-Puebla,* L.M. Liz-Marzán* *Real-time dual-channel multiplex SERS ultradetection* ***Journal of Physical Chemistry Letters*** (2014) 5, 73-79 (DOI: 10.1021/jz402419k)

104-P. Rivera_Gil, C. Vazquez-Vazquez, V. Giannini, M. P. Callao, W. J. Parak,* M. A. Correa-Duarte,* R. A. Alvarez-Puebla* *Plasmonic nanoprobe for real time optical monitoring of NO inside living cells* ***Angewandte Chemie International Edition*** (2013) 125, 13939-13943 (DOI: 10.1002/anie.201306390)

- **Selected as a "Hot Paper" by the Editors of Angew. Chem. Int. Ed.**

103-V. López-Puente, S. Abalde-Cela, P.C. Angelomé, R.A. Alvarez-Puebla, L.M. Liz Marzán* *Plasmonic Mesoporous Composites as Molecular Sieves for SERS Detection* ***Journal of Physical Chemistry Letters*** (2013) 4, 2715-2720 (DOI: 10.1021/jz4014085)

- **Highlighted in C&EN:** A. Hellemans "Molecular Sieves for SERS" ***Chemical & Engineering News*** August 13, 2013 (<http://cen.acs.org/articles/91/web/2013/08/Molecular-Sieves-SERS.html>)

102-C. Vázquez-Vázquez, B. Vaz, V. Giannini, M. Pérez-Lorenzo,* R.A. Alvarez-Puebla,* M. A. Correa-Duarte* *Nanoreactors for Simultaneous Remote Thermal-Activation and Optical Monitoring of Chemical Reactions* ***Journal of the American Chemical Society*** (2013) 135, 13616-13619 (DOI: 10.1021/ja4051873)

101-L. Guerrini, E. Pazos, C. Penas, E. Vázquez, J.L. Mascareñas,* R.A. Alvarez-Puebla* *Highly sensitive SERS quantification of the oncogenic protein c-Jun in cellular extracts* ***Journal of the American Chemical Society*** (2013) 135, 10314-10317 (DOI: 10.1021/ja405120x)

100-I. Castello Serrano, C. Vazquez-Vazquez, A. Matas Adams, G. Stoica, M.A. Correa-Duarte, E. Palomares,* R.A. Alvarez-Puebla,* *Effect of the silica thickness on the enhanced emission in single-particle quantum dots coated with gold nanoparticles* ***RSC Advances*** (2013) 3, 10691-10695 (DOI:10.1039/C3RA41685B)

99-J.M. Hermida-Ramon,* L. Guerrini, R.A. Alvarez-Puebla* *Analysis of the SERS Spectrum by Theoretical Methodology. Evaluating a Classical Dipole Model and the Detuning of the Excitation Frequency* ***Journal of Physical Chemistry A*** (2013) 117, 4584-4590 (DOI: 10.1021/jp402926w)

98-S. Gómez-Graña, J. Pérez-Juste, R.A. Alvarez-Puebla, A. Guerrero-Martínez, L.M. Liz-Marzán* *Self-assembly of Au@Ag Nanorods Mediated by Gemini Surfactants for Highly Efficient SERS-Active Supercrystals* ***Advanced Optical Materials*** (2013) 1, 477-481 (DOI: 10.1002/adom.201300162)
Journal Cover (July 2013 Vol. 1, Issue 7).

97-W. Li, R. Zamani, P. Rivera-Gil, B. Pelaz, M. Ibáñez, D. Cadavid, A. Shavel, R.A. Alvarez-Puebla, W. J. Parak, J. Arbiol, A. Cabot* *CuTe Nanocrystals: Shape and size control, plasmonic properties, and their use as SERS probes*

and photothermal agents *Journal of the American Chemical Society* (2013) 135, 7098–7101 (DOI: 10.1021/ja401428e)

- **ISI Highly cited (Chemistry).**
- **ISI Research front at** “strong tunable near-infrared localized surface plasmon resonance; vivo near-infrared photothermal therapy; tunable localized surface plasmon resonances; efficient near-infrared photothermal therapeutic agent; localized surface plasmon resonances”

96-D. Tsoutsis, L. Guerrini, J. Manuel Hermida-Ramon, V. Giannini, L.M. Liz-Marzan, A. Wei* R.A. Alvarez-Puebla* Simultaneous SERS detection of Copper and Cobalt at Ultratrace Levels *Nanoscale* (2013) 5, 5841–5846 (DOI: 10.1039/C3NR01518A)

- **Featured as Hot Article at the RSC Nanoscale website.**

95-M. Alba, N. Pazos-Perez, B. Vaz, P. Formentin, M. Tebbe, M.A. Correa-Duarte, P. Granero, J. Ferré-Borrull, R. Alvarez, J. Pallares, A. Fery, A.R. de Lera, L.F. Marsal, R.A. Alvarez-Puebla* Macroscale plasmonic substrates for highly sensitive SERS *Angewandte Chemie International Edition* (2013) 52, 6459–6463 (DOI: 10.1002/anie.201302285)

- **Journal Cover (July 2013 Vol. 52, Issue 25).**
- **Highlighted as Wiley-VCH Hot Topic**
- **Highlighted as Nanowerk Hot Topic:** “Goldnanopyramiden machen Kohlenmonoxid-Spuren in der Luft erkennbar” <http://www.nanowerk.com/news2/newsid=31376.php>
- **Highlighted in the news (innovations-report-de):** “Goldpyramiden machen Kohlenmonoxid-Spuren in der Luft erkennbar” <http://www.innovations-report.de/html/berichte/materialwissenschaften/goldpyramiden-kohlenmonoxid-spuren-luft-erkennbar-216999.html>

94-N. Pazos-Pérez, C.S. Wagner, J.M. Romo-Herrera, L.M. Liz-Marzán, F.J. Garcia de abajo, A. Wittemann, A. Fery, R.A. Alvarez-Puebla* Organized plasmonic clusters with high coordination number and extraordinary SERS enhancement *Angewandte Chemie International Edition* (2012) 51, 12688–12693 (DOI: 10.1002/anie.201207019)

Frontispiece image

- **Selected as a "Hot Paper" by the Editors of *Angew. Chem. Int. Ed.***
- **Featured as Hot Topic in Wiley Website**
- **Highlighted in the news (pro-physic.de):** “Goldige Einblicke ins Innere von Molekülen” http://www.pro-physik.de/details/news/3802411/Goldige_Einblicke_ins_Innere_von_Molekuelen.html

93-R.A. Alvarez-Puebla,* L.M. Liz-Marzán* SERS detection of inorganic molecules and atoms *Angewandte Chemie International Edition* (2012) 51, 11214–11223 (DOI: 10.1002/anie.201204438)

92-L. Rodriguez-Lorenzo, L. Fabris,* R.A. Alvarez-Puebla* Multiplex optical sensing with SERS. A critical review *Analytica Chimica Acta* (2012) 745, 10–23 (10.1016/j.aca.2012.08.003)

- **Invited Critical Review**

91-R. Ahijado-Guzmán, P. Gómez-Puertas, R.A. Alvarez-Puebla*, G. Rivas-Caballero, L.M. Liz-Marzán* SERS-based detection of the interactions between the essential cell division FtsZ protein and bacterial membrane elements *ACS Nano* (2012) 6, 7514–7520 (DOI: 10.1021/nn302825u)

90-L. Rodríguez-Lorenzo, R. de la Rica,* R. Alvarez-Puebla, L.M. Liz-Marzán, M.M. Stevens* Plasmonic nanosensors with inverse sensitivity by means of enzyme-guided crystal growth *Nature Materials* (2012) 11, 604–607 (DOI: 10.1038/NMAT3337)

- **Journal Cover (July 2012 Vol. 12, Issue 7).**

- **ISI Highly cited (Materials Science).**
- **ISI Research front at “core papers in plasmonic ELISA; plasmonic nanosensors; enzyme-guided crystal growth; inverse sensitivity; naked eye”**
- **Dedicated New&Views:**
 - M. Käll “Plasmonic nanosensors: Inverse sensitivity” *Nature Materials* (2012) 11, 570-571
 - A. Fenner “Prostate cancer: Novel “inverse sensitivity” enzyme-linked crystal-growth assay to detect ultralow PSA levels” *Nature Reviews Urology* (2012) 9, 354
 - J.H. Collier “Nanosensors Diminishing Returns” *Sci Transl Med* (2012) 4, 143ec126
- **Featured in the news:**
 - **Reuters:** July, 2012 “Analysis: Biosensors - the canary in a coalmine worth \$13 billion”
<http://uk.reuters.com/article/2012/07/22/us-science-biosensors-idUKBRE86I16H20120722>
 - **Real Sociedad Española de Física:** June, 2012 “Biosensores nanoplasmonicos con sensibilidad inversa”
http://www.rsef2.com/index.php?option=com_content&view=article&id=296:biosensores-nanoplasmonicos-con-sensibilidad-inversa-&catid=71:fisica-al-dia&Itemid=137
 - **Medicaldevice Network:** May, 2012 “European scientists develop new biosensor test to detect diseases earlier”
<http://www.medicaldevice-network.com/news/newseuropean-scientists-detect-diseases-earlier>
 - **PanEuropean Networks:** May, 2012 “Ultra-sensitive test developed to detect diseases in their earliest stages”
<http://www.paneuropeannetworks.com/detail/news/ultra-sensitive-test-developed-to-detect-diseases-in-their-earliest-stages.html>
 - **Medical Daily:** May, 2012 “Nano Sensor to Detect Disease before Symptoms Appear”
<http://physicsworld.com/cws/article/news/2012/may/28/new-nanosensors-could-detect-disease-earlier>
 - **Physics World:** May, 2012 “New nanosensors could detect disease earlier”
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 - **Nature Asia-Pacific Research Highlights:** (May 2012): Biosensors for which less is more”
<http://www.natureasia.com/en/research/index/highlight/id/1833/>
 - **Nanowerk:** October, 2012 “Plasmonic nanosensors developed for sophisticated HIV detection test”
<http://www.nanowerk.com/news2/newsid=27120.php>
 - **Nanowerk:** July, 2012 “Super-Sensitive Tests Could Detect Diseases Earlier” <http://www.nanowerk.com/news2/newsid=27120.php>
 - **IEEE Spectrum:** July, 2012 “Nanosensor Could Detect Prostate Cancer in its Early Stages”
http://spectrum.ieee.org/nanoclast/semiconductors/nanotechnology/nanosensor-detects-prostate-cancer-in-its-early-stages?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+IEEE+SpectrumNanoclastBlog+%28Nanoclast+-+IEEE+Spectrum%29

89-N. Pazos-Perez, F.J. Garcia de Abajo, A. Fery, **R.A. Alvarez-Puebla*** *From Nano to Micro: Synthesis and Optical Properties of Homogeneous Spheroidal Gold Particles and their Superlattices* *Langmuir* (2012) 28, 8909-8914(DOI: 10.1021/la3002898)

- **Invited Paper-“Colloidal Nanoplasmonics” special issue**

88-M. Mueller, M. Tebbe, D. Andreeva, M. Karg, **R.A. Alvarez-Puebla**, N. Pazos-Perez,* A. Fery* *Large-area organization of pNiPAM coated nanostars as SERS platforms for polycyclic aromatic hydrocarbons sensing in gas phase* *Langmuir* (2012) 28, 9168-9173 (DOI: 10.1021/la300454q)

- **Invited Paper-“Colloidal Nanoplasmonics” special issue**
- **Featured at the ACS Langmuir website.**



87-R.A. Alvarez-Puebla* *Effects of the excitation wavelength on the SERS spectrum* *Journal of Physical Chemistry Letters* (2012) 3, 857–866 (DOI:10.1021/jz201625j)

- **Invited Perspective**
- **Dedicated Editorial:** Gregory V. Hartland “Metal at the Nanoscale: Manipulating Matter to Control Light” *J. Phys. Chem. Lett.* (2012) 3, 959–960
- **Featured at the ACS J Phys Chem website.**
- **Between the Most-Read Articles of the year (March-May, 2012) in J Phys Chem Lett**

86-P. Aldeanueva-Potel, E. Carbó-Argibay, N. Pazos-Pérez, S. Barbosa, I. Pastoriza-Santos, **R.A. Alvarez-Puebla,*** L.M. Liz-Marzán *Spiked gold beads as substrates for single-particle SERS* ***ChemPhysChem*** (2012) 13, 2561–2565 (DOI: 10.1002/cphc.201101014)

- **Invited Paper-“Functional Nanomaterials and Their Applications” special issue)**
 - **Journal Cover** (Volume 13, Issue 10, July 16, 2012).
 - **Featured as Hot Topic in Wiley Website**
 - **Featured as Top-Beiträge in Angewandte Chemie**
 - **Editor’s Choice, ChemPubSoc Europe**
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85-N. Pazos-Perez, **R.A. Álvarez-Puebla*** *SERS Encoded Nanoparticles in* ***Raman Spectroscopy for Nanomaterials Characterization*** (C. Kumar Ed.) Springer-Verlag, Berlin (2012) Chapter 2, 33-49 (ISBN 978-3-642-20619-1)

- **Invited Book Chapter**
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84-D. Jimenez de Aberasturi, J.M. Montenegro Martos, I. Ruiz de Larramendi, T. Rojo, T. Klar, **R. Alvarez Puebla, L.** Liz Marzan, W. J. Parak* *Optical sensing of small ions with colloidal nanoparticles* ***Chemistry of Materials*** (2012) 24, 738–745 (DOI: 10.1021/cm202380r)

- **Invited Review-“Materials for Biological Applications” themed issue**
 - **Journal Cover** (March 2012 Vol. 24, Issue 5).
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83-R.A. Alvarez-Puebla*, E.R. Zubarev*, N.A. Kotov*, L.M. Liz-Marzán* *Self-Assembled Nanorod Supercrystals for Ultrasensitive SERS Diagnostics* ***Nano Today*** (2012) 7, 6-9 (10.1016/j.nantod.2011.11.001)

- **Invited Review**
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82-R. Perez-Pineiro,* M.A. Correa-Duarte, V. Salgueiriño, **R.A. Alvarez-Puebla*** *Label-free ultra-fast SERS screening of peptidic combinatorial libraries for drug discovery* ***Nanoscale*** (2012) 4, 113-116 (DOI:10.1039/C1NR11293G)

- **Journal Cover** (January 2012 Vol. 4, Issue 1).
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81-R.A. Alvarez-Puebla,* L.M. Liz-Marzán* *Traps and Cages for SERS detection* ***Chemical Society Reviews*** (2012) 41, 43-51 (DOI: 10.1039/c1cs15155j)

- **ISI Highly cited (Chemistry)**
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80-D. Tsoutsis, J.M. Montenegro, F. Dommershausen, U. Koert, L.M. Liz-Marzán, W.J. Parak, **R.A. Alvarez-Puebla*** *Quantitative SERS ultradetection of atomic inorganic ions: the case of chloride* ***ACS Nano*** (2011) 5, 7539–7546 (DOI: 10.1021/nn2025176)

79-L. Rodríguez-Lorenzo, Z. Krpetic, S. Barbosa, **R.A. Alvarez-Puebla*,** L.M. Liz-Marzán*, I.A. Prior, M. Brust *Intracellular mapping with SERS-encoded gold nanostars* ***Integrative Biology*** (2011) 3, 922-926 (DOI: 10.1039/C1IB00029B)

- **Invited Paper**
 - [Integrative Biology’s Top 2013 Cited Papers](#)
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78-R.A. Alvarez-Puebla,* L.M. Liz-Marzan* *Medical applications of plasmonic nanoparticles in* ***Nanomedicine – Basic and Clinical Application in Diagnostics and Therapy*** (C. Alexiou Ed.) (ISSN: 1663-0114; e-ISSN: 1663-0122) Karger Publishers (2011) Vol 2, Chapter 4, 106–115 (DOI: 10.1159/000328896)

- **Invited Book Chapter**
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77-N. Pazos-Perez, T. Borke, D.V. Andreeva,* **R.A. Alvarez-Puebla*** *Silver coated aluminium microrods as highly colloidal stable SERS platforms* ***Nanoscale*** (2011) 3, 3265–3268 (DOI:10.1039/C1NR10403A)

Invited Paper

76-R.A. Alvarez-Puebla*, A. Agarwal, P. Manna, B.P. Khanal, P. Aldeanueva-Potel, E. Carbó-Argibay, N. Pazos-Pérez, E.R. Zubarev*, N.A. Kotov*, L.M. Liz-Marzán* *Gold Nanorods 3D-Supercrystals as SERS substrates for the Rapid Detection of Scrambled Prions* ***Proceedings of the National Academy of Sciences of the United States of America*** (2011) 118, 8157-8161 (DOI: 10.1073/pnas.1016530108)

- **ISI Highly cited (Chemistry).**
- **ISI Research front at** “vertically aligned gold nanorod monolayer; Raman scattering spectroscopy substrates; gold nanorods 3d-supercrystals; femtomolar detection; arbitrary substrates”
- **Featured in the news:**
 - **Everyday Science**, May 9, 2011 “Vigo researchers design a new sensor capable of detecting prions in blood”
<http://www.scienceknowledge.org/2011/05/05/vigo-researchers-design-a-new-sensor-capable-of-detecting-prions-in-blood/>
 - **Telecinco**, May 4, 2011
 - **TVG**, May 4, 2011
 - **Voz Television**, May 5, 2011 “El mal de las vacas locas podría detectarse en vida”
(http://www.vtelevision.es/informativos/2011/05/05/0031_26_72320.htm)
 - **Radiofusión**, May 9, Arredor de nós (<http://67.213.211.110/audio/090511PUEBLA.mp3>)
 - **Radio Nacional de España**, May 3, 2011
 - **esRadio**, May 4, 2011 (<http://a28.video2.blip.tv/11370008452117/Esradio-040511EntrevistaRamonAlvarezPueblaInvestigadorCSICUnivers673.mp3?brs=78&bri=0.3>)
 - **Radio Voz**, May 4, 2011, Voces de Galicia
 - **Diario de Pontevedra**, May 4, 2011 “Un dispositivo detecta proteínas infecciosas es sangre”
(<http://duvi.uvigo.es/images/quiosco/diario040511.jpg>)
 - **La voz de Galicia**, May 3, 2011 “Un sensor detecta en análisis de sangre el mal de las vacas locas”
(<http://duvi.uvigo.es/images/quiosco/lavo030511.jpg>)
 - **ABC**, May 3, 2011 “La UVI colabora en el diseño de detector de proteínas infecciosas en sangre”
(<http://www.abc.es/agencias/noticia.asp?noticia=803350>)
 - **ElDía.es**, May 3, 2011 “Un nuevo sensor detecta la presencia de proteínas infecciosas en la sangre”
(<http://duvi.uvigo.es/images/quiosco/eldia030511.pdf>)
 - **Diario Siglo XXI**, May 3, 2011 “Diseñan un sensor capaz de identificar proteínas infecciosas en la sangre”
(<http://duvi.uvigo.es/images/quiosco/diariosigloxxi030511.pdf>)
 - **El Correo Gallego**, May 3, 2011 “Un vigués participa en el desarrollo de un sensor que detecta proteínas infecciosas en la sangre”
(<http://duvi.uvigo.es/images/quiosco/el030511.jpg>)
 - **El Economista**, May 3, 2011 “Investigadores vigueses diseñan un nuevo sensor capaz de detectar proteínas infecciosas en la sangre”
(<http://ecodiario.eleconomista.es/salud/noticias/3035869/05/11/Investigadores-vigueses-disen-an-nuevo-sensor-capaz-de-detectar-proteinas-infecciosas-en-la-sangre.html>)
 - **El Digital de Madrid**, May 3, 2011 “Un equipo del CSIC desarrolla un método para detectar el mal de las vacas locas antes de que aparezcan los síntomas” (<http://www.eldigitaldemadrid.es/ep/alcala-de-henares/SOCIEDAD/20110503172446>;
<http://www.eldigitaldemadrid.es/ep/general/SOCIEDAD/20110503201500>)
 - **La Voz Libre**, May 3, 2011 “Investigadores vigueses diseñan un nuevo sensor capaz de detectar proteínas infecciosas en la sangre”
(<http://www.lavozlibre.com/noticias/ampliar/248600/investigadores-vigueses-disen-an-nuevo-sensor-capaz-de-detectar-proteinas-infecciosas-en-la-sangre>)
 - **Terra.es**, May 3, 2011 “Investigadores vigueses diseñan un nuevo sensor capaz de detectar proteínas infecciosas en la sangre”
(<http://noticias.terra.es/2011/espana/0503/actualidad/investigadores-vigueses-disen-an-nuevo-sensor-capaz-de-detectar-proteinas-infecciosas-en-la-sangre.aspx>)
 - **RDIPress**, May 3, 2011 “Un sensor para detectar proteínas infecciosas en la sangre” (<http://www.rdiexpress.com/03/05/2011/un-sensor-para-detectar-proteinas-infecciosas-en-la-sangre/>)
 - **EuropaPress**, May 3, 2011 “Investigadores vigueses diseñan un nuevo sensor capaz de detectar proteínas infecciosas en la sangre”
(<http://www.europapress.es/salud/salud-bienestar-00667/noticia-investigadores-vigueses-disen-an-nuevo-sensor-capaz-detectar-proteinas-infecciosas-sangre-20110503201500.html>)
 - **Yahoo.es**, May 3, 2011 “Investigadores vigueses diseñan un nuevo sensor capaz de detectar proteínas infecciosas en la sangre”
(<http://es.noticias.yahoo.com/5/20110503/tes-investigadores-vigueses-disen-an-nu-c5455be.html>)
 - **El Periodico**, May 3, 2011 “Investigadores vigueses diseñan un nuevo sensor capaz de detectar proteínas infecciosas en la sangre”
(<http://www.elperiodicodearagon.com/noticias/noticia.asp?pkid=667766>)
 - **Atlántico Diario**, May 3, 2011 “Ya es posible detectar el mal de las ‘vacas locas’ antes de que aparezcan los síntomas”
(<http://www.atlantico.net/noticia/136745/posible/detectar/mal/vacas/locas/antes/aparezcan/sintomas/>)
 - **La Region**, May 3, 2011 “Ya es posible detectar el mal de las ‘vacas locas’ antes de que aparezcan los síntomas”
(<http://www.laregion.es/noticia/152775/posible/detectar/mal/vacas/locas/antes/aparezcan/sintomas/>)
 - **El Faro Digital**, May 3, 2011 “Investigadores vigueses diseñan un nuevo sensor capaz de detectar proteínas infecciosas en la sangre”
(<http://www.elfarodigital.es/portada/sanidad/143-espana/47721-un-nuevo-sensor-detecta-la-presencia-de-proteinas-infecciosas-en-la-sangre.html>)
 - **Muy Interesante**, May 3, 2011 “Un sensor detectará precozmente el Alzheimer y el Parkinson” (<http://www.muyinteresante.es/un-sensor-detectara-precozmente-el-alzheimer-y-el-parkinson>)
 - **El Periodico de Aragon**, May 3, 2011 “Nuevo método para detectar proteínas infecciosas en la sangre”
(<http://www.elperiodicodearagon.com/noticias/noticia.asp?pkid=667766>)

- **La Informacion**, May 4, 2011 "Investigadores vigueses diseñan un nuevo sensor capaz de detectar proteínas infecciosas en la sangre" (http://noticias.lainformacion.com/salud/mal-de-alzheimer/investigadores-vigueses-disenan-un-nuevo-sensor-capaz-de-detectar-proteinas-infecciosas-en-la-sangre_KTV48UgQs2mGQUO5lr4zk7/)
- **El Observador**, May 13, 2011 "Sensor detecta la presencia de proteínas infecciosas en la sangre" (<http://www.elobservadormexico.com/2011/05/12/sensor-detecta-la-presencia-de-proteinas-infecciosas-en-la-sangre/>)

75-L. Rodríguez-Lorenzo, J.M. Romo-Herrera, J. Pérez-Juste, R.A. Álvarez-Puebla, L.M. Liz-Marzán* *Reshaping and LSPR tuning of Au nanostars in the presence of CTAB* **Journal of Materials Chemistry** (2011) 21, 11544-11549 (DOI: 10.1039/c1jm10603a)

- **Invited Paper**-*"Chemical Transformations of Nanoparticles"* themed issue

74-R. Contreras-Cáceres, S. Abalde-Cela, P. Guardia-Girós, A. Fernández-Barbero, J. Pérez-Juste, R.A. Álvarez-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. Álvarez-Puebla, L.M. Liz-Marzán* *Nanoplasmonica Basada en Química Coloidal* **Anales de Química** (2011) 117, 221-228

- **Invited Paper**

72-A. Schweikart, N. Pazos-Pérez, R. Álvarez-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. Álvarez-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. Álvarez-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

69-S. Abalde-Cela, B. Auguie, M. Fischlechner, W.T.S. Huck, R.A. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Rodríguez-Lorenzo, **R.A. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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. Álvarez-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/0qm_sa98d1lqzV/1)
 - **Atlántico Diario**, 29 de octubre de 2009, "Investigadores vigueses desenvollen 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 desenvollen 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.

- **Journal Cover (September 8, 2009 Vol. 21, Issue 17).**
- **Featured at the ACS Chemistry of Materials website.**



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

- **Featured at the ACS Applied Materials and Interfaces website.**

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-thiadiazine-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

黄腐酸结构、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 generated from thermal decomposition of HAuCl₄ in block copolymers* *Advanced Materials* (2006) 18, 3233-3237

- **Between the Most accessed articles in *Adv. Mater.*, December 2006**
- **ISI Highly cited (Materials Science).**
- **ISI Research front at "Nanocrystalline gold octahedra block copolymer hauc₄ thermal decomposition generation synthesis-SERS properties; platonic gold nanocrystals; polyhedral gold nanocrystals; single-crystalline gold nano-octahedra; high-yield synthesis"**

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

20-R.A. Alvarez-Puebla,* R. F. Aroca, C. Valenzuela-Calahorro, J.J. Garrido *Retention of cobalt on a humin derived from brown coal* *Journal of Hazardous Materials* (2006) B135, 122-128

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

18-D.S. dos Santos Jr., R.C. Sanfelice, R. Alvarez-Puebla, O.N. Oliveira Jr., R.F. Aroca* *Optical enhancing properties in layer-by-layer films of dendrimer and gold nanoparticles* *Macromolecular Symposium* (2006) 245-246, 325-329

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

16-D.S. dos Santos Jr, R.A. Alvarez-Puebla, O.N. Oliveira Jr, R.F. Aroca* *Controlling the size and shape of gold nanoparticles in fulvic acid colloidal solutions and their optical characterization using SERS* Journal of Materials Chemistry (2005) 15, 3045–3049

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

- **Invited Review**
- **Between the Top 25 hottest articles in *Adv. Colloid Interface Sci.*, October 2005-March 2006**
- **ISI Highly Cited (Chemistry)**

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

13-R.A. Alvarez-Puebla, E. Arceo, P.J.G. Goulet, J.J. Garrido, R.F. Aroca* *Role of nanoparticle surface charge in surface-enhanced Raman scattering* Journal Physical Chemistry B (2005) 109, 3787-3792

- **Between the Most-Accessed Articles in *J. Phys. Chem. B*, January-June, 2005**

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

- **Between the Top 25 hottest articles in *Colloid Surf. A*, April-June, 2005**

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

- **Between the Most-Accessed Articles in *Anal. Chem.*, January-March 2005**

10-R.A. Alvarez-Puebla,* J.J. Garrido, C. Valenzuela-Calahorra, 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

8-R.A. Alvarez-Puebla,* D.S. dos Santos Jr, C. Blanco, J.C. Echeverria, J.J. Garrido *Particle and Surface Characterization of a Natural Illite and Study of its Copper Retention* Journal of Colloid and Interface Science (2005) 285, 41-49

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

6-R.A. Alvarez-Puebla, J.J. Garrido, R.F. Aroca* *Surface-enhanced vibrational microspectroscopy of fulvic acid micelles* Analytical Chemistry (2004) 76, 7118-7125

5-R.A. Alvarez-Puebla, C. Valenzuela-Calahorra, J.J. Garrido* *Retention of Co(II), Ni(II) and Cu(II) on a purified brown humic acid. Modeling and characterization of the sorption process* Langmuir (2004) 20, 3657-3664

4-R.A. Alvarez-Puebla, D.S. Dos Santos Jr., R.F. Aroca* *Surface-enhanced Raman scattering for ultrasensitive chemical analysis of 1 and 2-naphthalenethiols* The Analyst (2004) 129, 1251-1256

3-R.A. Alvarez-Puebla, C. Valenzuela-Calahorro, J.J. Garrido* *Modeling the adsorption and precipitation processes of Cu(II) on humin* **Journal of Colloid and Interface Science** (2004) 277, 55-61

2-R.A. Alvarez-Puebla, C. Valenzuela-Calahorro, J.J. Garrido* *Cu(II) Retention on a humic substance* **Journal of Colloid and Interface Science** (2004) 270, 47-55

1-R.A. Alvarez-Puebla, C. Aisa, J. Blasco, J.C. Echeverría, B. Mosquera, J.J. Garrido* *Copper Heterogeneous Nucleation on a Palygorskitic Clay: An XRD, EXAFS and Molecular Modeling Study* **Applied Clay Science** (2004) 25, 103-110.

Patents and Patent Applications (10)

10-R.A. Alvarez-Puebla, M. S. Gomez de Pedro, M. Garcia-Algar, M. Nazarenus, X. Feng, M. Sanchez-Alvarez, P. Sánchez Arizmendiarieta, 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

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

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

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

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

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

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

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)

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- 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.
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Invited Speaker in Conferences and Seminars (122)

- 122- R.A. Alvarez-Puebla**, Plasmonic porous materials and their applications in SERS *29th International Conference on Raman Spectroscopy (ICORS)*, Istanbul, Turkey, 2026 **Plenary Lecture**
- 121- R.A. Alvarez-Puebla**, Plasmonic MOFs in sensing *Meta 26*, Dublin, Ireland, 2026 **Invited Speaker**
- 120- R.A. Alvarez-Puebla**, Operando SERS *Matrafured 2026 International Conference on Chemical Sensors*, Budapest, Hungary, 2026 **Keynote Lecture**
- 119- R.A. Alvarez-Puebla**, Hybrid porous plasmonic materials and their applications in SERS *13th International Conference on Advanced Vibrational Spectroscopy (ICAVS 13) and the 5th International Conference on Enhanced Spectroscopy (ICES5)*, Xiamen, China, 2025 **Invited Speaker**
- 118- R.A. Alvarez-Puebla**, SERS in catalysis *Jiangnan University*, Wuxi, China 2025 **Plenary Lecture**
- 117- R.A. Alvarez-Puebla**, Pores and SERS: Chemical, Biological and Catalytical applications *Energy, materials and nanotechnology (EMN) Summit 2025*, Chengdu, China 2025 **Invited Speaker**
- 116- R.A. Alvarez-Puebla**, Hybrid plasmonic materials *Tianfu Jiangxi Laboratory Shimmer Center*, Chengdu, China 2025 **Plenary Lecture**
- 115- R.A. Alvarez-Puebla**, The role of porosity in SERS *Applied Materials & Interfaces Conference 2025 (AMIC 2025)*, Singapore, 2025 **Invited Speaker**
- 114- R.A. Alvarez-Puebla**, SERS Sensing and Operando Photocatalysis Using Plasmonic Metal-Organic Frameworks *Frontiers in nanophotonics: The 3rd iNanophotonic Symposium 2025*, Hong Kong, China, 2025 **Plenary Lecture**
- 113- R.A. Alvarez-Puebla**, SERS at 50: A Half-Century of Ultradetection Innovations *College of Arts and Science, Ohio University*, Athens, OH, USA, 2025 **Plenary Lecture**
- 112- R.A. Alvarez-Puebla**, Plasmonic Metal-organic Frameworks for SERS sensing and operando SERS photocatalysis *Singapore International Chemistry Conference*, Singapore, 2024 **Invited Speaker**
- 111- R.A. Alvarez-Puebla**, Optical and photocatalytical properties of MOF coated Plasmonic materials *Centro de Nanociencias y Nanotecnología, Universidad Nacional Autónoma de México*, Ensenada, BC, Mexico, 2024 **Plenary Lecture**
- 110- R.A. Alvarez-Puebla**, Espectroscopía SERS: 50 años de ultradetección *Centro de Física Aplicada y Tecnología Avanzada, Universidad Nacional Autónoma de México*, Santiago de Querétaro, Querétaro, Mexico, 2024 **Plenary Lecture**
- 109- R.A. Alvarez-Puebla**, photocatalysis and selective optical sensing with metal-organic frameworks *32nd International Materials Research Congress, Cancun, Quintana Roo, Mexico*, 2024 **Invited Speaker**
- 108- R.A. Alvarez-Puebla**, Selective SERS on Plasmonic Metal-organic Frameworks *PIERS2024*, Chengdu, China, 2024 **Invited Speaker**
- 107- R.A. Alvarez-Puebla**, Composites Nanoparticle-Metal-organic Frameworks for SERS sensing and photocatalysis *International Conference in Quantum Light & Nanophysics*, Abu Dhabi, UAE, USA, 2024 **Invited Speaker**
- 106- R.A. Alvarez-Puebla**, *Gordon Research Conference (GRC) on Plasmonically Powered Processes*, Ventura, CA, USA, 2023 **Discussion Leader in thermoplasmonics**
- 105- R.A. Alvarez-Puebla** Optical fast imaging for bioapplications, *Invited Seminar*, Universidade de Vigo, Vigo, Spain, 2022 **Plenary Lecture**
- 104- R.A. Alvarez-Puebla** SERS imaging in biology and medicine, *Nanolight*, Benasque, Spain, 2022 **Invited Speaker**
- 103- R.A. Alvarez-Puebla** Basic concepts in SERS and potential applications, *Workshop on plasmonic NPs: synthesis characterization and applications*, Santiago de Compostela, Spain, 2021 **Keynote Lecture**

- 102- R.A. Alvarez-Puebla** Optical devices for sensing, *Seminars in Plasmonics*, CICESE-UNAM, Ensenada, Mexico, 2020 **Plenary Lecture**
- 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** Fluorescence 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**
- 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** *Multiplex 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 diagnóstico*, **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 hybrid 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 nanoestructurados basados en Raman/SERS y fluorescencia/SEF, Nanotecnologías 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

1. Prof. Roger Guimera – Universitat Rovira i Virgili, Spain. ***Complex systems, Statistical physics, Bayesian statistics***
2. Prof. In Yee Phang – Jiangnan University, China. ***Optical Materials***
3. Prof. Niek Van Hulst - Institut de Ciències Fotòniques (ICFO), Spain. ***Quantum Photonics***.
4. Prof, Xing Yi Ling – Nanyang Technological University, Singapore. ***Hybrid Plasmonic Materials***
5. Prof. Nicholas A. Kotov - Department of Chemical Engineering; University of Michigan; USA. ***Colloidal Particles; Thin Films and Hybrid Materials***.
6. Prof. Alexander Govorov – Ohio University, USA. ***Plasmonic Modeling and Metamaterials***.
7. Prof. Zhiming Wan – University of Electronic Science and Technology of China, Chengdu, China. ***Hybrid materials***.
8. Prof. Wolfgang Parak – Department of Physics; Hamburg University; Germany. ***Bionanomedicine and biophotonics***.
9. Prof. Jose Luis Mascareñas – Universidade de Santiago de Compostela, Spain ***Chemical biology***.
10. Prof. Miguel A. Correa-Duarte – Universidade de Vigo, Spain. ***Hybrid Functional Materials and Photochemistry***.
11. Prof. Eduardo Garcia-Rico – Grupo HM Hospitales. ***Cancer Biology and Clinical Oncology***.
12. Prof. Stefan Maier – Monash University, Australia – ***Mid-IR and single particle spectroscopy***.
13. Prof. Nordin Felidj – Université Paris Diderot, ***Plasmonic surfaces***.
14. Prof. Olivia Reinaud – Université Paris Descartes, ***Organic materials for optical sensing***.
15. Prof. F. Javier García de Abajo - Nanophotonics Group; ICFO. ***Modeling of Optical Properties of Nanoparticles and Nanoparticle Assemblies and their Field Enhancement***.