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Pablo Romero-Gómez

PhD in Nanotechnology, with experience in solar cells

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(ORP proposition d'emploi – n° 00000985397)

Feb 2011	PhD in Nanotechnology	GPA 4.00	University of Seville
Jul 2008	MS in Nanotechnology	GPA 4.00	University of Seville
Jul 2006	BS in Physics	Average grade 8.2 (10)	University of Cordoba

Research

EPFL- École Polytechnique Fédérale de Lausanne

- 06/2016 - present
- Large Scale Nanowires Solar Cells
 - Anti-counterfeit Technology for Pharmaceutical Application
- (Marie Curie Fellow)



ICFO-The Institute of Photonic Sciences

- 03/2014-05/2016
- Fabrication of High Efficiency Organic Solar Cells
 - Design and Simulate of Integrated Photonic Devices in OSC
- (Research Fellow)
- 03/2011-03/2014
- I-V, EQE, Kelvin probe, optical and stability measurements
- (Postdoctoral Researcher)



ICMS- Institute of Material Sciences of Seville

- 01/2007-12/2010
- Study of Wettability and Photocatalytic activity of ZnO and TiO₂ doped materials
 - Fabrication of Thin Films by dry methods (Magnetron Sputtering, PECVD, Evaporation...)
- (JAE-CSIC GRANT 06)
- 10/2006-12/2006
- XPS, UV-Vis spectroscopy, Raman spectroscopy, FESEM, AFM measurements
- (Fellowship)



Awards

- 2018
- The project entitled: "A Two-Resonance Tapping Cavity for an Optimal Light Trapping in Thin-Film Solar Cells" has been awarded the "Duran Farell" prize, the highest prize awarded by the Polytechnic University of Catalonia for industry-related technology developments.
- 2016
- The project entitled: "Towards Roll-to-Roll Production of Third Generation Solar Cells (R2R-3G)" has been awarded the Marie Skłodowska-Curie action, call: H2020-MSCA-IF-2015.
- 2014
- The work Semi-transparent Solar Cells has been nominated in the IV edition of best science in Spain award given by the newspaper La Vanguardia.
- 2006
- Fellowship JAE-CSIC GRANT 06 in the Institute of Material Science of Seville

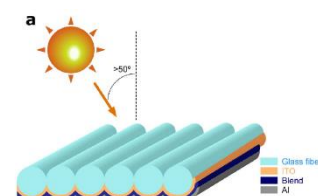
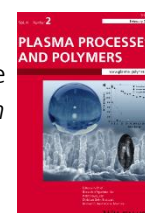
2005	Teacher assistant in the physics department
2004	Fellowship to develop informatics tools for the teaching of the quantum physics course

Scientific Contributions

Journal Publications

- [1] **P. Romero-Gomez**; V. Rico; A. Borrás; A. Barranco; J. P. Espinós; J. Cotrino; and A. R. González-Elípe "Chemical State of Nitrogen and Visible Surface and Schottky Barrier Driven Photoactivities of N-Doped TiO₂ Thin Films" J. Phys. Chem. C 113, 13341, 2009.
- [2] V. Rico, **P. Romero-Gomez**, J.L. Hueso, J.P. Espinós, A.R. Gonzalez-Elípe "Wetting angles and photocatalytic activities of illuminated TiO₂ thin films" Catal. Today 143, 347, 2009.
- [3] **P. Romero-Gomez**, A. Palmero, F. Yubero, M. Vinnichenko, A. Kolitsch, A.R. Gonzalez-Elípe "Surface nanostructuring of TiO₂ thin films by ion beam irradiation" Scr. Mater. 60, 574-577, 2009.
- [4] **P. Romero-Gomez**, A. Palmero, T. Ben, J.G. Lozano, S. I. Molina, A. R. González-Elípe, "Surface nanostructuring of TiO₂ thin films by high energy ion irradiation" Phys. Rev. B 82, 3163, 2010.
- [5] M. Assali, M. Pernía Leal, I. Fernández, **P. Romero-Gomez**, R. Baati, and N. Khier "Improved Non-Covalent Biofunctionalization of Multi-Walled Carbon Nanotubes Using Carbohydrate Amphiphiles with a Butterfly-Like Polyaromatic Tail" Nano Res. 3, 764, 2010.
- [6] **P. Romero- Gomez**, Said Hamad , J.C. González, A. Barranco, J.P. Espinós, J. Cotrino, A.R. González-Elípe "Band gap narrowing vs. formation of electronic states in the gap in N-TiO₂ thin film" J. Phys. Chem. C 114, 22546, 2010.
- [7] **P. Romero-Gomez**, J. Toudert, J. Sanchez-Valencia, A. Borrás, A. Barranco, A. R. Gonzalez-Elípe, "Tunable Nanostructure and Photoluminescence of Columnar ZnO Films Grown by Plasma Deposition" J. Phys. Chem. C 114, 20932, 2010.
- [8] J. M. García-Martín, R. Alvarez, **P. Romero-Gomez**, A. Cebollada, and A. Palmero "Tilt angle control of nanocolumns grown by glancing angle sputtering at variable argon pressures" Appl. Phys. Lett. 97, 173103, 2010.
- [9] **P. Romero-Gomez**, A. Borrás, A. Barranco, J. P. Espinos, A. R. Gonzalez-Elípe "Enhanced Photoactivity in Bilayer Films with Buried Rutile-Anatase Heterojunctions" Chemphyschem 12, 191, 2011.
- [10] R. Alvarez, **P. Romero-Gomez**, J. Gil-Rostra, J. Cotrino, F. Yubero, A. Palmero and A. R. Gonzalez-Elípe "On the microstructure of thin films grown by an isotropically directed deposition flux" J. Appl. Phys. 108, 064316, 2010.
- [11] A. Isabel Borrás, M. Macías-Montero, **P. Romero-Gomez** and A. Rodríguez Gonzalez-Elípe "Supported plasma-made 1D heterostructures: perspectives and applications" J. Phys. D: Appl. Phys. 43, 064316, 2011.

- [12] **P. Romero-Gomez**; V Rico; J P Espinos; Agustin R Gonzalez-Elipe; Robert G Palgrave; Russell G Egdell, MA, D. Phil "Nitridation of nanocrystalline TiO₂ thin films by treatment with ammonia" *Thin Solid Films* 519, 11, 2011.
- [13] R. Álvarez, L. González-García, **P. Romero-Gomez**, J. Cotrino, A. R. Gonzalez-Elipe and A. Palmero "Theoretical and Experimental Characterization of TiO₂ Thin Films Deposited at Glancing Angles" *J. Stat. Mech. Theory E* 44, 38, 2011.
- [14] M. Macias-Montero, A. Borrás, Z. Saghi, **P. Romero-Gomez**, J. R. Sanchez-Valencia, J. C. Gonzalez, A. Barranco, P. Midgley, J. Cotrino and A. R. Gonzalez-Elipe "Superhydrophobic supported Ag-NPs@ZnO-nanorods with photoactivity in the visible range" *J. Mater. Chem.* 22, 1341, 2012.
- [15] F.J. Ferrer, J. Gil-Rostra, L. González-García, J. Rubio-Zuazo, **P. Romero-Gomez**, M.C. López-Santos, F. Yubero "Attenuation lengths of high energy photoelectrons in compact and mesoporous SiO₂ films" *Surf. Sci.* 606, 820, 2012.
- [16] R. Betancur, A. Martínez-Otero, X. Elias, **P. Romero-Gomez**, S. Colodrero, H. Miguez, J. Martorell "Optical interference for the matching of the external and internal quantum efficiencies in organic photovoltaic cells" *Sol. Energ. Mat. Sol. Cells* 104, 87, 2012.
- [17] R. Alvarez, **P. Romero-Gomez**, J. Gil-Rostra, J. Cotrino, F. Yubero, A. R. Gonzalez-Elipe, and A. Palmero "Growth of SiO₂ and TiO₂ thin films deposited by reactive magnetron sputtering and PECVD by the incorporation of non-directional deposition fluxes" *Phys. Status Solidi A* 210, 4, 796, 2013.
- [18] **P. Romero-Gomez**, J.C. Gonzalez, A. Bustamante, A. Ruiz-Conde, P. J. Sanchez-Soto "Study of the in-situ thermal transformations of Limonite used as pigment coming from Peru" *Bol. Soc. Esp. Ceram. V.* 53, 127, 2013.
- [19] **P. Romero-Gomez**, C. Lopez-Santos, A. Borrás, J. Pedro Espinosa, A. Palmero, A. R. Gonzalez-Elipe "Enhancement of visible light-induced surface photo-activity of nanostructured N-TiO₂ thin films modified by ion implantation" *Chem. Phys. Lett.* 582, 95, 2013.
- [20] R. Betancur*, **P. Romero-Gomez***, A. Martínez-Otero, X. Elias, M. Maymo, and J. Martorell (**These authors contributed equally to this work*) "Transparent polymer solar cells employing a layered light-trapping architecture" *Nature Photonics* 7, 995, 2013.
- [21] M. Macias-Montero, A. Borrás, **P. Romero-Gomez**, J. Cotrino, A. R. Gonzalez-Elipe "Plasma Deposition of Superhydrophobic Ag@TiO₂ Core@shell Nanorods on Processable Substrates" *Plasma Process. Polym.* 11, 164, 2014.
- [22] M. Mariano, F. J. Rodriguez, **P. Romero-Gomez**, G. Kozyreff & J. Martorell "Light coupling into the Whispering Gallery Modes of a fiber array thin film solar cell for fixed partial Sun tracking" *Sci. Rep.* 4, 4959, 2014.



- [23] J. Ramón Sanchez-Valencia, M. Alcaire, **P. Romero-Gomez**, M. Macias-Montero, Francisco J. Aparicio, Ana Borrás, Agustín R. González-Elípe, and Ángel Barranco “Oxygen Optical Sensing in Gas and Liquids with Nanostructured ZnO Thin Films Based on Exciton Emission Detection” *J. Phys. Chem. C*, 118, 9852–9859, 2014.
- [24] F. Pastorelli, **P. Romero-Gomez**, R. Betancur, A. Martínez-Otero, P. Mantilla-Pérez, N. Bonod, J. Martorell “Enhanced Light Harvesting in Semitransparent Organic Solar Cells using an Optical Metal Cavity Configuration” *Adv. Energy Mater* 5, 1400614, 2014.
- [25] **P. Romero-Gomez**, R. Betancur, A. Martínez-Otero, X. Elias, M. Mariano, B. Romero, B. Arredondo, R. Vergaz, and J. Martorell “Enhanced stability in semi-transparent PTB7/PC71BM photovoltaic cells” *Sol. Ener. Mater. Sol. Cells*, 137, 44, 2015.
- [26] P. Mantilla, A. Martínez-Otero, **P. Romero-Gomez** and J. Martorell “4-Terminal Tandem Photovoltaic Cell Using Two Layers of PTB7:PC71BM for an Optimal Light Absorption” *ACS Appl. Mater. Interfaces* 7, 19835, 2015.
- [27] B. Arredondo, M. B. Martín-López, B. Romero, R. Vergaz, **P. Romero-Gomez**, J. Martorell “Monitoring degradation mechanisms in PTB7:PC71BM photovoltaic cells by means of impedance spectroscopy.” *Sol. Ener. Mater. Sol. Cells* 144, 422, 2016.
- [28] M. Mariano, G. Kozyreff, L. G. Gerling, **P. Romero-Gomez**, J. Puigdollers, J. Bravo-Abad and J. Martorell “Intermittent Chaos for Ergodic Light Trapping in a Photonic Fiber Plate” *Light, sci. appl.* 5, 16216, 2016.
- [29] Q. Liu, P. Mantilla-Pérez, M. Montes Bajo, **P. Romero-Gomez**, J. Martorell “UV-Induced Oxygen Removal for Photostable, High-Efficiency PTB7-Th:PC71BM Photovoltaic Cells” *ACS Appl. Mater. Interfaces* 8, 28750, 2016.
- [30] S. Colodrero, **P. Romero-Gomez**, P. Mantilla, J. Martorell “Nanoparticle Assisted Mechanical Delamination for Freestanding High Performance Organic Devices” *Adv. Funct. Mater.* 27, 1602969, 2017.
- [31] Q. Liu, **P. Romero-Gomez**, P. Mantilla-Pérez, S. Colodrero, J. Toudert, J. Martorell “A Two-Resonance Tapping Cavity for an Optimal Light Trapping in Thin-Film Solar Cells” *Adv. Energy Mater.* 7, 1700356, 2017.
- [32] D. Ramírez, J. I. Uribe, L. Francaviglia, **P. Romero-Gomez**, A. Fontcuberta i Morral, F. Jaramillo “Photophysics behind High Luminescent Two-dimensional Hybrid Perovskite (CH₃ (CH₂)₂ NH₃)₂ (CH₃NH₃)₂ PbBr₁₀ thin films” *J. Mater. Chem. C* 6, 6216, 2018.
- [33] L. Francaviglia, A. Giunto, W. Kim, **P. Romero-Gomez**, J. Vukajlovic-Plestina, M. Friedl, H. Potts, L. Güniat, G. Tütüncüoğlu, A. Fontcuberta i Morral “Anisotropic-Strain-Induced Band Gap Engineering in Nanowire-Based Quantum Dots” *Nano Lett.* 18, 2393, 2018.
- [34] A. Dorodnyy, Y. Salamin, P. Ma, J. Vukajlovic Plestina, N. Lassaline, D. Mikulik, **P. Romero-Gomez**, A. Fontcuberta i Morral, J. Leuthold “Plasmonic Photodetectors” *IEEE J. Sel. Top. Quantum Electron.*, 24, 6, 2018.
- D. Mikulik, A. C. Meng, R. Berrazouane, J. Stükelberger, P. Romero-Gomez, K. Tang, F.-J. Haug, A. Fontcuberta i Morral, P. C. McIntyre “Surface Defect Passivation of Silicon Micropillars” *Adv. Mater. Interfaces*, 1800865, 2018.



Book Chapters

- I. **P. Romero-Gomez**, A. Barranco, J. Cotrino, J. P. Espinós, F. Yubero, A. R. González-Elípe “Plasma Deposition of N-TiO₂ Thin Film” WILEY-VCH, Weinheim, Germany, Industrial Plasma Technology, 349-355, 2010.

- II. M. Mariano, P. Mantilla-Pérez, **P. Romero-Gomez**, A. Martínez-Otero, X. Elias, R. Betancur, S. Colodrero, J. Martorell *"One-dimensional photonic crystals for light management in organic solar cells"* Springer, Switzerland, Organic and Hybrid Photonic Crystals 303-320, 2015.
- III. P. Mantilla-Perez, Q. Liu, S. Colodrero, P. Romero-Gomez, J. Martorell *"Oxide Layers in Organic Solar Cells for an Optimal Photon Management"* Elsevier, USA, The Future of Semiconductor Oxides in Next-Generation Solar Cells 481–499, 2018.

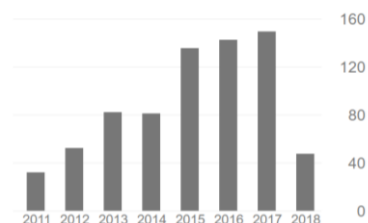
Review

- I. **P. Romero-Gomez**, F. Pastorelli, P. Mantilla-Pérez, M. Mariano, A. Martínez-Otero, X. Elias, R. Betancur, J. Martorell *"Semi-transparent polymer solar cells"* J. Photon. Energy. 5, 057212, 2015 doi:10.1117/1.JPE.5.057212.

Statistics from google scholar
- Apr 2018

All Since 2011

Citations	748	628
h-index	17	17
i10-index	22	20



Patents

- I. F. Yubero, A. R. Gonzalez-Elipé, J. Ramon, J. Gil Rostra, C. Rodriguez, P. **Romero-Gomez**, R. Pozas BRAVO, P. Del Arco González, F. Gracia Torres, A. Medina Jimenez, *"Stone Agglomerate Slab Or Flag With TiO_2 Or ZnO Coating"* Forn No: PCT/ES2009/000393 Europe (2010) COSENTINO-CSIC
- II. J. Martorell, R. Betancur, **P. Romero Gomez**, A. Martinez Otero *"Semitransparent Photoconversion Device"* FORM No: EP13166037.5 Spain (2013) ICFO
- III. J. Martorell, R. Betancur, **P. Romero Gomez**, L. Vuong *"Photoconversion Device with Enhanced Photon Absorption"* FORM No: US 2013/0192666, EEUU (2013) ICFO
- IV. J. Martorell, M. Mariano, **P. Romero Gomez**, F. J. Rodríguez *"Photovoltaic device with fiber array for sun tracking"* FORM No: 14//157,138, USA (2014) ICFO

Presentations in Congresses

1. **P. Romero-Gomez**, A. Barranco Quero, V. Rico Gavira, J. Espinos Manzorro, J. Cotrino Bautista, A. R. Gonzalez-Elipé *"N-Doped TiO_2 Photoactive Optical Thin Films in the Visible-Light Region Deposited by Plasma Enhanced CVD"* Oral. European Materials Research Society Spring Meeting. Emrs. Estrasburgo. E-Mrs, Strasbourg (France), 2009
2. **P. Romero-Gomez**, J. Toudert, J. Sánchez Valencia, A. Barranco Quero, A. Rodriguez Gonzalez-Elipé *"Photo-Luminiscense Property of ZnO Thin Films Prepared by PECVD"* Oral, 10th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures. Granada (Spain). 2009
3. A. Rodriguez Gonzalez-Elipé, **P. Romero-Gomez**, A. Barranco Quero, J. Cotrino Bautista, J. Pedro Espinos Manzorro *"N-Doping of TiO_2 Thin Films Prepared by Plasma Enhanced Chemical Vapour Deposition"* Oral. Eleventh International Conference on Plasma Surface Engineering. Conference and Exhibition. Talk Garmisch (Germany), 2008
4. **P. Romero-Gomez**, A. Barranco Quero, J. Cotrino Bautista, J. Pedro Espinos Manzorro, A. Rodriguez Gonzalez-Elipé. *Preparation of N- TiO_2 Thin Films by Plasma Enhanced Chemical Vapour Deposition. Poster. Proceedings of the 3rd International School of Advanced Plasma*

Technology. School of Advanced Plasma Technology. Japanese association for Plasma Technology. Poster. Varenna, Italy, 2008

5. **P. Romero-Gomez**, J. P. Espinos Manzorro, J. Cotrino Bautista, A. Barranco Quero, A. Rodriguez Gonzalez-Elife. *Sensibilización en el Visible de Capas de TiO₂ Preparadas Mediante PVD y PECVD*. Poster. X Congreso Nacional de Materiales. X Congreso Nacional de Materiales. San Sebastian (Spain) 2008
6. **P. Romero-Gomez**, J.C. Gonzalez, A. Bustamante, Ma. Arjonilla, A. Ruiz-Conde y P.J. Sanchez-Soto. *Estudio de la transformacion cromatica y de fases de un pigmento de limonita procedente de Peru*. Poster. SECV. Madrid (Spain). 2010
7. A. Isabel Borrás, J. Carlos González, M. Coll, **P. Romero-Gomez**, P. Groening. *A surface enhanced resonance raman study of supported organic nanowires based on metal-Phthalocyanines* Poster. IV Workshop Nanociencia y Nanotecnología Analítica. Madrid (Spain) 2010
8. **P. Romero-Gomez**, A. Palmero, A.R. González-Elife-, T. Ben, S. J. Molina
"Nanoestructuración Superficial de Películas Delgadas de Anatasa Mediante Irradiación con Iones de Alta Energía" Poster XI Congreso Nacional de Materiales. Zaragoza(Spain) 2010
9. **P. Romero-Gomez**, J Tourdert, A. Barranco A.R. González-Elife " Nanoestructura y Propiedades Luminiscentes de Capas Columnares de ZnO Preparadas Mediante PECVD" Oral XI Congreso Nacional de Materiales, Zaragoza, 2010
10. **P. Romero-Gomez**, J.Toudert, A. Barranco and A.R. Gonzolez-Elife "Tunable Nanostructure and Photoluminescence of Columnar ZnO Films Grown By Plasma Deposition" Oral. 11th European Vacuum Conference, EVC-11. Salamanca. 2010.
11. A. Borrás, **P. Romero-Gomez**, M. Macías, J. Ramon sanchez-Valencia, R. Alvarez, J. Cotrino and A. R. Gonzalez-Elife "Plasma Sheath Effects for the Formation of Supported 1D Nanostructures by Plasma Deposition" Poster, 20th European Conference on the Atomic and Molecular Physics of Ionized Gases, Novi Sad (Serbia), 2010
12. **P. Romero-Gomez**, J.Toudert, A. Barranco and A.R. Gonzolez-Elife, M. Macías A. Borrás "Tunable nanostructure and photoluminescence of columnar and fiber-like ZnO films grown by plasma deposition" Poster, EMRS,Nice(France), 2011.
13. **P. Romero-Gomez** A. Palmero, T.Ben, J.G. Lozano, S.I. Molina and A.R. Gonzalez-Elife "Surface Nanostructuring of TiO₂ thin films by high energy irradiation" Poster, EMRS, Nice France, 2011
14. R. Betancur, **P. Romero-Gomez** and J. Martorell "Optical Resonator Effect to Enhance the Efficiency of Organic Photovoltaic Cells" Oral, MRS, Boston, 2011

15. A. R. Gonzalez-Elipé, A. Borrás, M. Macías, **P. Romero-Gomez**, J. Cotrino and A. Barranco *"From Plasma Deposited Thin Films to the Preparation of Supported Oxide Nanofibers"* Oral, MRS, Boston, 2011
 16. R. Betancur, A. Martínez-Otero, **P. Romero-Gomez**, X. Elías, S. Colodrero, H. Miguez and J. Martorell *"Matching the External to the Internal Quantum Efficiencies to Enhance Light Harvesting in Organic Photovoltaic Cells"*, Oral, MRS, Boston, 2012
 17. **P. Romero-Gomez**, R. Betancur, A. Martínez-Otero, X. Elías, M. Maymo and J. Martorell *"High Performance Transparent Polymer Solar Cells with Near Infrared Light Trapping obtained from a Layered Photonic Architecture"* INVITED TALK, MRS, Boston, 2013.
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18. **P. Romero-Gomez**, A. Martínez-Otero, R. Betancur, X. Elías and J. Martorell *"High Performance Semi-Transparent Cells with Assisted infrared light trapping Using Photonic-Nanolayer"* Oral, MRS, San Francisco, 2013
 19. J.R. Sanchez-Valencia, M. Alcaire, **P. Romero-Gomez**, M. Macías-Montero, F.J. Aparicio, A. Borrás, A.R. González-Elipé, A. Barranco *"Fluorescence detection of oxygen in gas and liquid media by means of ZnO thin films prepared by plasma enhanced chemical vapor deposition"* Poster, EMRS, France, 2014
 20. F. Pastorelli, S. Bidault, **P. Romero-Gomez**, R. Betancur, A. Martínez-Otero, J. Martorell, N. Bonod *"Optical antennas, optical cavity and photonic crystals to enhance the performance of organic solar cells"* ORAL, EMRS, France, 2014
 21. **P. Romero-Gomez**, F. Pastorelli, R. Betancur, A. Martínez-Otero, X. Elías N. Bonod, J. Martorell *"Semitransparent Organic Solar Cell Toward Opaque Performance"* ORAL, MRS, San Francisco, 2014
 22. M. Mariano, M. Rodríguez **P. Romero-Gomez**, G. Kozyreff, J. Martorell *"Light Coupling into the Whispering Gallery Modes of a Fiber Array Organic Solar Cell to Achieve Mechanically Fixed Sun Tracking"* ORAL, MRS-San Francisco, 2014
 23. M. Mariano, F. Rodríguez **P. Romero-Gomez**, G. Kozyreff, J. Martorell *"Sun Tracking Using a Fixed Photovoltaic Cell by Coupling Light into the Whispering Gallery Modes of a Fiber Array"* ORAL, EU PVSEC 2014 Amsterdam (Netherlands), 2014

24. J.R. Sanchez-Valencia, M. Alcaire, **P. Romero-Gomez**, M. Macías-Montero, F.J. Aparicio, A. Borrás, A.R. González-Elípe, A. Barranco “*Oxygen Optical Sensing in Gas and Liquids with Nanostructured ZnO Thin Films Based on Exciton Emission Detection*” ORAL, MRS 2014 Boston (EEUU) 2014.
25. **Pablo Romero-Gomez**, Rafael Betancur, Francesco Pastorelli, Alberto Martínez-Otero, Xavier Elías, Jordi Martorell “IR light trapping in organic solar cells using photonic crystals” ORAL, NN14, Thessaloniki, Greece, 2014.
26. Beatriz Romero, Belén Arredondo, R. Vergaz, **P. Romero-Gomez**, Jordi Martorell “Evolution of the electrical impedance of PTB7:PCBM organic solar cells” ORAL EMRS’15, Lille, Francia, 11-15, Mayo, 2015.
27. M. Mariano, G. Kozyreff, G. Gerling, J. Puigdollers, **P. Romero-Gomez**, J. Bravo-Abad, J. Martorell “Chaotic Light Trapping in Periodic Fiber Arrays” INVITED TALK, META15, New York, USA, 2015.
28. P. Mantilla-Pérez, Q- Liu, **P. Romero-Gomez**, J. Martorell “Towards High Efficiency Multi-junction Organic Solar Cells” ORAL, ISFOE16, Thessaloniki, Greece, 2016.
29. **P. Romero-Gomez** “Light Trapping in Semitransparent Organic Solar Cell” Poster, LMPV Symposium, Amsterdam, 2016.
30. S. Colodrero, **P. Romero-Gomez**, P. Mantilla, J. Martorell “Transfer printing approach to fabricate adaptable, self-standing and high efficiency polymer solar cells” INVITED TALK, METAL16, Málaga, Spain, 2016.
31. Q. Liu, **P. Romero-Gomez**, P. Mantilla-Pérez, S. Colodrero, J. Martorell “Broadband Optical Cavity for High Efficiency Polymer Solar Cells” Talk, Natureconference, Wuhan, China, 2016.
32. D. Mikulik, M. Ricci, **P. Romero-Gomez**, G. Tutuncuoglu, F. Matteini, J. Vukajlovic, E. Alarcon-Llado and A. Fontcuberta i Morral “Single nanowire current-voltage measurements by C-AFM and its effect on the output characteristics of solar cells based on nanowire ensembles” ORAL, EMC17, South Bend, USA, 2017.
33. A. Rudra, D. Mikulik, **P. Romero Gomez**, B. Dwir, A. Fontcuberta i Morral, E. Kapon “High temperature selective area metalorganic vapour phase epitaxy of GaAs nanowires using N₂ as carrier gas” ORAL, EW-MOVPE17, Grenoble, France, 2017.
34. D. Mikulik, **P. Romero-Gomez**, M. Ricci, G. Tutuncuoglu, F. Matteini, J. Vukajlovic, N. Vulić, M. Friedl, E. Alarcon-Llado, B. Dwir, A. Rudra, E. Kapon and A. Fontcuberta i Morral “From single NW solar cell to large scale NW array solar cell development through Conductive AFM analysis” ORAL, MRS spring, Phoenix, USA, 2017.

35. P. Romero Gomez, D. Mikulik, G. Tutuncuoglu, H. Potts, M. Friedl, A. Fontcuberta i Morral “Large Scale Nanowire Solar Cells” Poster, congrès photovoltaïque national, Lausanne, Switzerland, 2017.

36. P. Romero Gomez, D. Mikulik, G. Tutuncuoglu, H. Potts, M. Friedl, J. Vukajlovik-Plestina, B. Dwir, A. Rudra, E. Kapon, A. Fontcuberta i Morral “Robust nanowire arrays for new generation solar cells” Poster, Nanowire Week, Lund Sweden, 2017.

Leadership Competency

École polytechnique fédérale de Lausanne- EPFL

- Semester project – 2016 Gaëtan Bernard
- Semester project – 2017 Tiphaine Clémence Nolwenn Mathieu-Pennober
- Supervisor of Master thesis of Alexis Romain Gervais

The Institute of Photonic Sciences- ICFO

- Supervisor of Mr. Antonio Jesus Leal Martin (PhD Summer fellowship, 2012)
- Experimental supervisor of Mr. Juan Esteban Calle Montoya (Master Student, 2013)
- Supervisor of Ms. Maria Belén Martín López (PhD Summer fellowship, 2015)

The University of Córdoba- UCO

- Technical supervisor of the project “Improving the educational infrastructure of the laboratories of the Faculty of Physics of Havana University” fund €5000.00.
- Wrote and won €2341.00 in grant to develop informatics tools for the teaching of the quantum physics course.

Communication Competency

- Interview in the newspaper *La Vanguardia* entitled “Las ventanas del futuro serán paneles solares transparentes”, 2014
- Interview in the newspaper *El Periodico* entitled “Ventanas con energía”, 2013
- Press release in the journal *Araciénia* entitled “Finestres eficients per captar energia solar”, 2013
- Press release in the journal *Sinc* entitled “Nuevas células solares transparentes iluminan el camino hacia ciudades más sostenibles”, 2013
- Press release in the journal *Solar News* entitled “Un día usaremos ventanas solares o teléfonos autosuficientes en materia energética”, 2014

Stays in Internationally Recognized Centres

1. Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB, Stuttgart (Germany), 2009, **8 Weeks**, Bactericidal surfaces based on Ag-TiO₂
2. European Synchrotron Radiation Facility (ESRF), Grenoble (France) 2008-2009 **2 Weeks**, *Measures of XPS with high energy (Synchrotron Radiation)*
3. Forschungszentrum Dresden-Rossendorf, *Dresden (Alemania)* 2007-2009, **5 Weeks** *Surface nanostructuring of oxide thin films by ion beam irradiation*

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