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## RAÚL J. MARTÍN-PALMA

### **Professor of Applied Physics**

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### **Adjunct Professor of Materials Science and Engineering**

Department of Materials Science and Engineering  
The Pennsylvania State University  
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## SUMMARY

Raúl J. Martín-Palma received his M.S. Degree in Applied Physics in 1995 and his Ph.D. in Physics in 2000, both from the Universidad Autónoma de Madrid. He has been Post-Doctoral Fellow at the New Jersey Institute of Technology and Visiting Professor at The Pennsylvania State University. Martín-Palma has received young scientist awards from the Materials Research Society, European Materials Research Society, and Spanish Society of Materials in recognition for his research on nanostructured materials.

He has authored or co-authored over 150 peer-reviewed journal publications. Additionally he has co-authored three books on nanotechnology, 13 book chapters, and co-edited a book. Moreover, he has chaired several international conferences in the broad fields of nanoscience and engineered biomimicry.

Martín-Palma is a Fellow of SPIE and a member of the American Physical Society. He serves as an associate editor for the Journal of Nanophotonics and Frontiers in Bionics and Biomimetics. He is a member of the editorial advisory board of Open Material Sciences and a member of the editorial Board of Frontiers in Optics and Photonics.

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## EDUCATION

March 2000	<b>Ph.D. in Physics</b> Universidad Autónoma de Madrid (Spain)
June 1995	<b>M.Sc. in Applied Solid State Physics</b> Universidad Autónoma de Madrid (Spain)
June 1993	<b>B.Sc. in Physics</b> Universidad Autónoma de Madrid (Spain),

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## APPOINTMENTS

May 2005-date	<b>Full Professor of Physics</b>
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	Universidad Autónoma de Madrid (Spain)
February 2009-date	<b>Adjunct Professor of Materials Science and Engineering</b> The Pennsylvania State University (University Park, PA)
Sept. 2007-June 2008	<b>Visiting Professor</b> The Pennsylvania State University (University Park, PA)
May-August 2006	<b>Short-term Research Scholar</b> The Pennsylvania State University (University Park, PA)
May 2004-May 2005	<b>Associate Professor of Physics</b> Universidad Autónoma de Madrid (Spain)
Nov. 1998-April 2004	<b>Assistant Professor of Physics</b> Universidad Autónoma de Madrid (Spain)

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### FELLOWSHIPS

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April-October 2000	<b>Postdoctoral Fellowship</b> New Jersey Institute of Technology (Newark, NJ) Project: Synthesis and characterization of thin films for solar cells, microelectronics and photonic applications.
Aug. 1995-Nov. 1998	<b>Graduate Fellowship</b> Universidad Autónoma de Madrid (Spain)

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### AWARDS

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- **Premio de Joven Investigador** (*Young Scientist Award*), VII Congreso Nacional de Materiales (Madrid, Spain, 2002), Sociedad Española de Materiales (SEMAT).
- **Graduate Student Silver Award**, 1999 MRS Fall Meeting (Boston, MA, USA), Materials Research Society.
- **Young Scientist Award**, E-MRS'99 Spring Meeting (Strasbourg, France), European Materials Research Society.
- **Young Scientist Award**, E-MRS'98 Spring Meeting (Strasbourg, France), European Materials Research Society.

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### PROFESSIONAL AFFILIATIONS

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- Fellow, The International Society for Optics and Photonics (SPIE, USA).
- American Physical Society (APS, USA).

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## PATENTS

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*Dispositivo ocular (Ocular device).*

J.J. Serrano Olmedo, R.A. García Mendoza, A. Mina Rosales, D. Ruiz Casas, D. Losada Bayo, F.J. Muñoz Negrete, G. Rebolleda Fernandez, A. Muñoz Noval, M. Manso Silvan, **R.J. Martín Palma**, and V. Torres Costa.

International patent number. WO 2013/011176 A2.

Date: January 24, 2013.

*Partículas magnético-luminiscentes para aplicaciones biomédicas (Magnetic-luminescent particles for biomedical uses).*

A. Muñoz Noval, V. Torres Costa, D. Gallach Pérez, V. Sánchez Vaquero, M. Manso Silván, **R.J. Martín Palma**, J.P. García Ruiz.

International patent number: WO 2011/086210 A1.

Date: July 21, 2011.

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## BOOKS

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*Nanotechnology for Microelectronics and Photonics (2nd edition).*

**R.J. Martín-Palma** and J.M. Martínez-Duart

Elsevier (2017).

*Engineered Biomimicry.*

A. Lakhtakia and **R.J. Martín-Palma**.

Elsevier (2013).

*Nanotechnology: A Crash Course.*

**R.J. Martín-Palma** and Akhlesh Lakhtakia.

SPIE Press (2010).

*Nanotechnology for Microelectronics and Optoelectronics.*

J.M. Martínez-Duart, **R.J. Martín-Palma** and F. Agulló-Rueda

Elsevier (2006).

*Field Guide to Optical Biosensing.*

**R.J. Martín-Palma**.

SPIE Press (2021).

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## BOOK CHAPTERS

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*Porous silicon: An attractive material for biomedical uses.*

G. Recio-Sánchez, R.J. Peláez, and **R.J. Martín-Palma**.

in "Inorganic Frameworks as Smart Nanomedicines" Elsevier (2018). A. Mihai Grumezescu (editor).

*Microscopy of porous silicon.*

**R.J. Martín-Palma** and V. Torres-Costa.

in "Handbook of Porous Silicon (Second Edition)". Springer (2017). L. Canham (editor).

*Silicon-Based Nanoparticles for Biosensing and Biomedical Applications.*

**R.J. Martín-Palma**, J. Hernández-Montelongo, A. Muñoz-Noval, M. Manso-Silván, and V. Torres-Costa.  
in “Encyclopedia of Inorganic and Bioinorganic Chemistry”. John Wiley & Sons, Ltd. (2015) C. Lukehart (editor).

*Microscopy of porous silicon.*

**R.J. Martín-Palma** and V. Torres-Costa.  
in “Porous Silicon – The Handbook”. Springer (2015). L. Canham (editor).

*Chemical sensing and biosensing with nanostructured porous silicon.*

V. Torres-Costa, G. Recio-Sánchez, D. Gallach, M. Manso-Silván, J. López-García, M. Arroyo-Hernández, and **R.J. Martín-Palma**.  
in “Nanomaterials for Water Management: Signal Amplification for Biosensing from Nanostructures” Pan Stanford Publishing (2015). R. Marks and I. Abdulhalim (editors).

*Optical properties of porous silicon materials for biomedical applications.*

V. Torres-Costa and **R.J. Martín-Palma**.  
in “Porous silicon for biomedical applications”. Woodhead Publishing Ltd. (2014). H. Santos (editor).

*Vapor-Deposition techniques.*

**R. J. Martín-Palma** and A. Lakhtakia.  
in Engineered Biomimicry. Elsevier (2013). Akhlesh Lakhtakia and R.J. Martín-Palma (editors).

*Nanostructures.*

**R.J. Martín-Palma** and A. Lakhtakia.  
in Nanosciences and Nanotechnology, [Eds. V. Nikolayevich Kharkin, C. Bai, O.O. Awadelkarim, and S. Kapitsa], in Encyclopedia of Life Support Systems (EOLSS), Developed under the Auspices of the UNESCO, Eolss Publishers, Oxford, UK.

*Protective Coatings for Optical Systems.*

J.M. Martínez-Duart, **R.J. Martín-Palma**, G. García-Ayuso, A. Gutiérrez-Llorente and O. Sánchez-Garrido.  
in “Protective Coatings and Thin Films”. Y. Pauleau and P.B. Barna (editors).  
Kluwer Academic Publishers (1997). ISBN. 0-7923-4380-8.

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## JOURNAL PUBLICATIONS

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159. *Structural, optical and electrical properties of barium titanate.*

A. Rached, M.A. Wederni, K. Khirouni, S. Alaya, **R.J. Martín-Palma**, and J. Dhahri.  
Materials Chemistry and Physics 267, 124600 (2021).

158. Self-powered broadband hybrid organic–inorganic photodetectors based on PEDOT:PSS and silicon micro-nanostructures.

R. Ramadan, V. Torres-Costa, and **R.J. Martín-Palma**.  
Journal of Materials Chemistry C 9, 4682 (2021).

157. *Effect of electrolyte pH value and current density on the electrodeposition of*

- silver nanoparticles into porous silicon.*  
R. Ramadan and **R.J. Martín-Palma.**  
Journal of Nanophotonics 14(4), 040501 (2020).
156. *Effect of doping in the physico-chemical properties of BaTiO<sub>3</sub> ceramics.*  
A.Rached, M.A.Wederni, A.Belkahla, J.Dhahri, K.Khirouni, S.Alaya, and **R.J. Martín-Palma.**  
Physica B: Condensed Matter 596, 412343 (2020).
155. *Structural, morphological, vibrational, and impedance properties of ytterbium modified bismuth titanate.*  
M.A. Wederni, D. Ben Jemia, H. Rahmouni, **R.J. Martín-Palma**, K. Khirouni, S. Alaya, and R. Chtourou.  
Chemical Physics Letters 755, 137787 (2020).
154. *Organic-inorganic hybrid solar cells based on 1D ZnO/P3HT active layers and 0D Au as cathode.*  
V. González, I. López, **R.J. Martín-Palma**, Y. Peña, and I. Gómez.  
Materials Research Express 7, 075005 (2020).
153. *Fabrication of zinc oxide/nanostructured porous silicon micropatterns on silicon.*  
R. Ramadan, V. Torres-Costa, and **R.J. Martín-Palma.**  
Coatings 10(6), 529 (2020).
152. *Biomimetic hierarchical micro/nano texturing of TiAlV alloys by femtosecond laser processing for the control of cell adhesion and migration.*  
M. Martínez-Calderón, **R.J. Martín-Palma**, A. Rodríguez, M. Gómez-Aranzadi, J.P. García-Ruiz, S.M. Olaizola, and M. Manso-Silván.  
Physical Review Materials 4, 056008 (2020).
151. *Electrical Characterization of MIS Schottky Barrier Diodes Based on Nanostructured Porous Silicon and Silver Nanoparticles with Applications in Solar Cells.*  
R. Ramadan and **R.J. Martín-Palma.**  
Energies 13(9), 2165 (2020).
150. *Hybrid porous silicon/silver nanostructures for the development of enhanced photovoltaic devices.*  
R. Ramadan, M. Manso-Silván, and **R.J. Martín-Palma.**  
Journal of Materials Science 55, 5458–5470 (2020).
149. *Quantum tunneling in low-dimensional semiconductors mediated by virtual photons.*  
**R.J. Martín-Palma.**  
AIP Advances 10, 015145 (2020).
148. *Microwave plasma and rapid thermal processing of Indium-Tin oxide thin films for enhancing their performance as transparent electrodes.*  
R. Ramadan, K. Abdelhady, M. Manso-Silván, V. Torres-Costa, and **R.J. Martín-Palma.**  
Journal of Photonics for Energy 9(3), 034001 (2019).

147. *Ultra-thin Hafnium Oxide Coatings grown by Atomic Layer Deposition: Hydrophobicity/Hydrophilicity over time.*  
**R.J. Martín-Palma** and C. Pantano.  
Materials Research Express 6, 086457 (2019).
146. *Hybrid Nanostructured Porous Silicon-Silver Layers for Wideband Optical Absorption.*  
**R.J. Martín-Palma**, P.D. McAtee, R. Ramadan, and A. Lakhtakia.  
Scientific Reports 9, 7291 (2019).
145. *Voltage controlled scattering from porous silicon Mie-particles in liquid crystals.*  
P. Lakshmi Madhuri, **R.J. Martín-Palma**, B. Martín-Adrados, and I. Abdulhalim.  
Journal of Molecular Liquids 281, 108-116 (2019).
144. *Biomimetic photonic structures for optical sensing.*  
**R.J. Martín-Palma** and M. Kolle.  
Optics and Laser Technology 109, 270-277 (2019).
143. *Bioreplication for optical applications.*  
**R.J. Martín-Palma** and A. Lakhtakia.  
MRS Communications 8(2), 220-225 (2018).
142. *Thermoelectric properties of nanostructured porous silicon.*  
**R.J. Martín-Palma**, H. Cabrera, B. Martín-Adrados, D. Korte, E. Pérez-Cappe, Y. Mosqueda, M.A. Frutis, and E. Danguillecourt.  
Materials Research Express 5, 015004 (2018).
141. *Progress on bioinspired, biomimetic, and bioreplication routes to harvest solar energy.*  
**R.J. Martín-Palma** and A. Lakhtakia.  
Applied Physics Reviews 4, 021103 (2017).
140. *Surface micro- and nano-texturing of stainless steel by femtosecond laser for the control of cell migration.*  
M. Martínez-Calderón, M. Manso-Silván, A. Rodríguez, M. Gómez-Aranzadi, J.P. García-Ruiz, S.M. Olaizola, and **R.J. Martín-Palma**.  
Scientific Reports 6, 36296 (2016).
139. *Study of the formation mechanism of hierarchical silicon structures produced by sequential ion beam irradiation and anodic etching.*  
E. Punzón-Quijorna, S. Kajari-Shröder, F. Agulló-Rueda, M. Manso Silván, **R.J. Martín-Palma**, P. Herrero Fernández, V. Torres-Costa, and A. Climent-Font.  
Vacuum 138, 238-243 (2017).
138. *Hydrophobic perfluoro-silane functionalization of porous silicon photoluminescent films and particles.*  
C. Rodriguez, P. Laplace, D. Gallach-Pérez, P. Pellacani, **R.J. Martín-Palma**, V. Torres-Costa, G. Ceccone, M. Manso-Silván.  
Applied Surface Science 380, 243-248(2016).
137. *Nanoporous silicon-based surface patterns fabricated by UV laser interference techniques for biological applications.*

- G. Recio-Sánchez, R.J. Peláez, F. Vega, and **R.J. Martín-Palma**.  
Journal of Physics D: Applied Physics 49(22), 225401 (8pp) (2016).
136. *Nanoporous silicon-based platforms for biological applications fabricated by UV laser techniques*.  
G. Recio-Sánchez, R.J. Peláez, C.N. Afonso, F. Vega, and **R.J. Martín-Palma**.  
ECS Transactions 69(2), 137-140 (2015).
135. *The role of photonics in energy*.  
Z.H. Kafafi, **R.J. Martín-Palma**, A.F. Nogueira, D.M. O'Carroll, J.J. Pietron, I.D.W. Samuel, F. So, N. Tansu, and L. Tsakalakos.  
Journal of Photonics for Energy 5(1), 050997 (2015).
134. *Nanostructured porous silicon: The winding road from photonics to cell scaffolds. A review*.  
J. Hernández-Montelongo, Á. Muñoz-Noval, J.P. García-Ruiz, V. Torres-Costa, **R.J. Martín-Palma**, and M. Manso-Silván.  
Frontiers in Bioengineering and Biotechnology 3, 60 (2015).
133. *Angular distribution of light emission from compound-eye cornea with conformal fluorescent coating*.  
**R.J. Martín-Palma**, A. Miller, D.P. Pulsifer, and A. Lakhtakia.  
Applied Physics Letters 105(10), 103703 (2014).
132. *Nanostructured copper/porous silicon hybrid systems as efficient sound-emitting devices*.  
G. Recio-Sánchez, K. Namura, M. Suzuki, and **R.J. Martín-Palma**.  
Nanoscale Research Letters 9, 487 (2014).
131. *Bioreplicated visual features of nanofabricated buprestid beetle decoys evoke stereotypical male mating flights*.  
M.J. Domingue, A. Lakhtakia, D.P. Pulsifer, L.P. Hall, J.V. Badding, J.L. Bischof, **R.J. Martín-Palma**, Z. Imrei, G. Janik, V.C. Mastro, M. Hazen, and T.C. Baker.  
Proceedings of the National Academy of Sciences of the United States of America 111(39), 14106–14111 (2014).
130. *Photo-assisted immersion deposition of Cu clusters onto Porous Silicon: A Langmuir-Hill ligand-locus Model Applied to the Growth Kinetics*.  
G. Recio, D. Gallach, M. Manso Silván, K. Fukami, **R.J. Martín-Palma**, G.R. Castro, and Á. Muñoz-Noval.  
Journal of Physical Chemistry C 118(27), 14905-14912 (2014).
129. *Ultraviolet laser patterning of porous silicon*.  
F. Vega, R.J. Peláez, T. Kuhn, C.N. Afonso, G. Recio-Sánchez, and **R.J. Martín-Palma**.  
Journal of Applied Physics 115(18), 184902 (2014).
128. *Nanostructured porous silicon-mediated drug delivery*.  
**R.J. Martín-Palma**, J. Hernández-Montelongo, V. Torres-Costa, M. Manso-Silván, and A. Muñoz-Noval.  
Expert Opinion on Drug Delivery 11(8), 1273-83 (2014).

127. *Adhesion and Proliferation of Human Mesenchymal Stem Cells from Dental Pulp on Porous Silicon Scaffolds.*  
P.-Y. Collart-Dutilleul, E. Secret, I. Panayotov, D. Deville de Périère, **R.J. Martín-Palma**, V. Torres-Costa, M. Martin, C. Gergely, J.-O. Durand, F. Cunin, and F.J. Cuisinier.  
ACS Applied Materials and Interfaces **6**(3), 1719–1728 (2014).
126. *Book Review: Nanofabrication Handbook.*  
**R.J. Martín-Palma.**  
Journal of Nanophotonics **7**(1), 079897-1-2 (2013).
125. *Oblique-angle deposition: evolution from sculptured thin films to bioreplication.*  
A. Lakhtakia and **R. J. Martín-Palma.**  
Scripta Materialia **74**, 9-12 (2014).
124. *Hybrid gold/porous silicon thin films for plasmonic solar cells.*  
S. Sánchez de la Morena, G. Recio-Sánchez, V. Torres-Costa, and **R. J. Martín-Palma.**  
Scripta Materialia **74**, 33-37 (2014).
123. *On alignment of nematic liquid crystals infiltrating chiral sculptured thin films.*  
H.K. Reisman, D.P. Pulsifer, **R.J. Martín-Palma**, A. Lakhtakia, R. Dabrowski, and I. Abdulhalim.  
Journal of Nanophotonics **7**(1), 073591-1-10 (2013).
122. *Optimized Development of Sebaceous Latent Fingermarks on Non-porous Substrates with Conformal Columnar Thin Films.*  
S. Muhlberger, D.P. Pulsifer, A. Lakhtakia, **R.J. Martín-Palma**, and R.C. Shaler.  
Journal of Forensic Sciences **59**(1), 94-102 (2014).
121. *Laser fabrication of porous silicon based platforms for cell culturing.*  
R.J. Peláez, C.N. Afonso, F. Vega, G. Recio-Sánchez, V. Torres-Costa, M. Manso-Silván, J.P. García-Ruiz, and **R.J. Martín-Palma.**  
Journal of Biomedical Materials Research: Part B - Applied Biomaterials **101**(8), 1463-8 (2013).
120. *Surface plasmon resonance study of Au nanorod structures templated in mesoporous silicon.*  
Á. Muñoz-Noval, K. Fukami, **R.J. Martín-Palma**, T. Sakka, M. Manso-Silván, and Yukio H. Ogata.  
Plasmonics **8**(1), 35-40 (2013).
119. *Fabrication of Polymeric Visual Decoys for the Male Emerald Ash Borer (*Agrilus planipennis*).*  
D.P. Pulsifer, A. Lakhtakia, M.S. Narkhede, M.J. Domingue, B.G. Post, J. Kumar, **R.J. Martín-Palma**, and T.C. Baker,  
Journal of Bionic Engineering **10**(2), 129-138 (2013).
118. *Design and characterization of biofunctional magnetic porous silicon flakes.*  
A. Muñoz Noval, R. García, D. Ruiz Casas, D. Losada Bayo, V. Sánchez-Vaquero, V Torres Costa, **R.J. Martín Palma**, M.A. García, J.P. García Ruiz, J.J. Serrano Olmedo, J.F. Muñoz Negrete, and M. Manso Silván.



- Acta Biomaterialia 9(4), 6169–6176 (2013).
117. *Editorial Special Issue on Biomimetic Sensors.*  
**R.J. Martín-Palma** and A. Lakhtakia.  
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116. *Chemical stabilization of porous silicon for enhanced biofunctionalization with immunoglobulin.*  
N. Naveas, V. Torres-Costa, D. Gallach, J. Hernández-Montelongo, **R.J. Martín-Palma**, J.P. García-Ruiz and M. Manso-Silván.  
Science and Technology of Advanced Materials 13(4), 045009 (7pp) (2012).
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G. Recio, Z.Y. Dang, V. Torres-Costa, M.B.H. Breese, and **R.J. Martín-Palma**.  
Nanoscale Research Letters 7, 449 (2012).
114. *Nanostructured porous silicon micropatterns as a tool for substrate-conditioned cell research.*  
E. Punzón-Quijorna, V. Sánchez-Vaquero, A. Muñoz-Noval, M.J. Pérez-Roldan, **R.J. Martín-Palma**, F. Rossi, A. Climent-Font, M. Manso-Silván, J.P. García-Ruiz, and V. Torres-Costa.  
Nanoscale Research Letters 7, 396 (2012).
113. *Hybrid cobalt-porous silicon systems: protective effect of the matrix in metal oxidation.*  
Á. Muñoz-Noval, D. Gallach, M.Á. García García-Tuñón, V. Ferro-Llanos, P. Herrero, K. Fukami, Y.H. Ogata, V. Torres-Costa, **R.J. Martín-Palma**, A. Climent-Font, and M. Manso Silván.  
Nanoscale Research Letters 7, 495 (2012).
112. *Silicon-based photonic crystals fabricated using proton beam writing combined with electrochemical etching method.*  
Z. Dang, M.B.H. Breese, G. Recio-Sánchez, S. Azimi, J. Song, H.D. Liang, A. Banas, V. Torres-Costa, and **R.J. Martín-Palma**.  
Nanoscale Research Letters 7, 416 (2012).
111. *Surface enhanced fluorescence of anti-tumoral drug emodin adsorbed on silver nanoparticles and loaded on porous silicon.*  
M. Hernández, G. Recio, **R.J. Martín-Palma**, J.V. García-Ramos, C. Domingo, and P. Sevilla.  
Nanoscale Research Letters 7, 364 (2012).
110. *Electroless nanoworm Au films on columnar porous silicon layers.*  
Á. Muñoz-Noval, V. Torres-Costa, **R.J. Martín-Palma**, P. Herrero-Fernández, M. Ángel García, K. Fukami, Y.H. Ogata, and M. Manso Silván.  
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109. *Nanostructured porous silicon photonic crystal for applications in the infrared.*  
G. Recio-Sánchez, V. Torres-Costa, M. Manso-Silván, and **R.J. Martín-Palma**.  
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108. *Properties of bilayer contacts to porous silicon.*  
D. Gallach, V. Torres-Costa, L. García Pelayo, A. Climent-Font, **R.J. Martín-Palma**, M. Barreiros, C. Sporer, J. Samitier, and M. Manso.  
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107. *Engineered biomimicry for harvesting solar energy: a bird's eye view.*  
**Raúl J. Martín-Palma** and Akhlesh Lakhtakia.  
*International Journal of Smart and Nano Materials* 2012, 1-8, (2012).
106. *Aging of porous silicon in physiological conditions; Cell adhesion modes on scaled 1D micropatterns.*  
V. Sánchez-Vaquero, V. Torres-Costa, Á. Muñoz-Noval, M.J. Pérez-Roldán, E. Punzón-Quijorna, D. Gallach-Pérez, L. González-Méndez, A. Valsesia, G. Ceccone, **R.J. Martín-Palma**, F. Rossi, A. Climent-Font, J.P. García-Ruiz, and M. Manso-Silván.  
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105. *High surface-water interaction in super-hydrophobic nanostructured silicon surfaces: convergence between nanoscopic and macroscopic scale phenomena.*  
A. Muñoz-Noval, M. Hernando-Pérez, V. Torres-Costa, **R.J. Martín-Palma**, P.J. de Pablo, and M. Manso-Silván.  
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D.P. Pulsifer, **R.J. Martín-Palma**, S.E. Swiontek, C.G. Pantano, and A. Lakhtakia.  
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E. Punzón-Quijorna, V. Torres-Costa, M. Manso-Silván, **R.J. Martín-Palma**, and A. Climent-Font.  
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100. *Gold nanostructures for surface-enhanced Raman spectroscopy, prepared by electrodeposition in porous silicon.*  
K. Fukami, M.L. Chourou, R. Miyagawa, A. Muñoz-Noval, T. Sakka, M. Manso-

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99. *Guest Editorial: Selected Papers from the Nanostructured Thin Films III Conference.*  
**R.J. Martín-Palma** and Yi-Jun Jen.  
Journal of Nanophotonics 5, 051599 (2011).
98. *Surface Functionalization of Nanostructured Porous Silicon by APTS: Toward the Fabrication of Electrical Biosensors of Bacterium Escherichia coli.*  
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97. *Silicon-based hybrid luminescent/magnetic porous nanoparticles for biomedical applications.*  
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**R.J. Martín-Palma**, J.M. Martínez-Duart and A. Malats-Riera.  
Boletín de la Sociedad Española de Cerámica y Vidrio 37(1), 7 (1998).
  1. *Effect of photoetching on porous silicon morphology.*  
R. Guerrero-Lemus, J.D. Moreno, **R.J. Martín-Palma**, J.M. Martínez-Duart, P. Herrero, M.L. Marcos, J. González-Velasco and P. Gómez.  
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### INVITED AND CONTRIBUTED PAPERS

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156. *Infiltration of the wing scales of Morpho butterflies with metals.*  
R. Ramadan, S.R. Mouchet, V. Torres-Costa, and **R.J. Martín-Palma**.  
“Bioinspiration, Biomimetics, and Bioreplication X” Conference (SPIE Smart Structures/NDE 2020, Anaheim (CA, USA), 26-30 April 2020 (poster).
155. *Accurate determination of the optical constants of porous silicon from self-standing layers.*  
R. Ramadan, V. Torres-Costa, and **R.J. Martín-Palma**.  
PSST2020 International Conference, Lido di Camaiore (Italy), 15-20 March 2020

(poster).

154. *Synthesis, characterization and application of lithium manganese oxide nanocomposites for the sustainable lithium recovery from brine.*  
R. Pulido, N. Naveas, **R.J. Martín-Palma**, T. Graber, I. Brito, F. Agulló-Rueda, C. Morales, L. Soriano, L. Pascual, and M. Manso-Silván.  
Nanomaterials Applied to Life Sciences, Madrid (Spain), 29-31 January 2020 (poster).
153. *Characterization and application of iron oxide nanoparticles for the treatment of a simulated copper-rich acid mine drainage.*  
N. Naveas, R. Pulido, T. Graber, **R.J. Martín-Palma**, F. Agulló-Rueda, I. Brito, M.Á. García, N. Martín-Pavón, M.T. Sevilla, and M. Manso-Silván.  
Nanomaterials Applied to Life Sciences, Madrid (Spain), 29-31 January 2020 (poster).
152. *Bioreplicated Structures for Optical Applications.*  
**R.J Martín-Palma.**  
International Focus Workshop “Bio-inspired Optics and Photonics – From Metamaterials to Applications”, Dresden (Germany), 24-27 June 2019 (invited).
151. *Fabrication of bioinspired micro/nanotextured surfaces by femtosecond laser processing.*  
M. Martínez-Calderón, A. Rodríguez, V. Torres-Costa, Miguel Manso-Silván, S.M. Olaizola, and **R.J Martín-Palma.**  
“Bioinspiration, Biomimetics, and Bioreplication IX” Conference (SPIE Smart Structures/NDE 2019, Denver (CO, USA), 3-7 March 2019 (poster).
150. *Mesoporous Silicon Microparticles (MSMPs) enhance inflammatory responses in human DCs and macrophages.*  
I. Real-Arévalo, B. Amorós, L. Diego-González, A. Revilla, B. Martín-Adrados, M. Viñuela, J.I. Tudela, **R.J. Martín-Palma**, J.L. Subiza, E. Martínez-Naves, and M. Gómez del Moral.  
Amsterdam, August 2018 (poster).
149. *Investigating the origin of light emission from speleothems and biospeleothems.*  
**R.J. Martín-Palma**, H. Cabrera, and C. Brewer-Carías.  
“Bioinspiration, Biomimetics, and Bioreplication VIII” Conference (SPIE Smart Structures/NDE 2018, Portland (OR, USA), 4-8 March 2018 (oral).
148. *Bioreplicated Structures for Optics and Photonics.*  
**R.J Martín-Palma.**  
2017 MRS Fall Meeting, Boston (MA, USA), November 26-December 1, 2017 (invited).
147. *Surface micro- and nano-texturing of stainless steel by femto-second laser for the control of cell migration.*  
M. Martínez-Calderón, M. Manso-Silván, A. Rodríguez, M. Gómez-Aranzadi, E. Granados, **R.J. Martín-Palma**, and Santiago Miguel Olaizola.  
X Reunión Española de Optoelectrónica (OPTOEL 2017), Santiago de Compostela (Spain). June 12-14. 2017 (poster).

146. *Emulation of biological structures and processes to harvest solar energy.*  
A. Lakhtakia and **R.J. Martín-Palma.**  
“Bioinspiration, Biomimetics, and Bioreplication VII” conference (part of SPIE Smart Structures/NDE), Portland (OR), USA, 26-27 March 2017 (oral).
145. *Applications of nanostructured porous silicon in biomedicine.*  
**R.J. Martín-Palma.**  
Winter College on Optics: Advanced Optical Techniques for Bio-imaging, Trieste (Italia), February 13-24, 2017 (invited).
144. *Surface texturing at the micron and nano-scales by laser techniques for the control of cell adhesion and migration.*  
M. Martínez-Calderón, M. Manso-Silván, A. Rodríguez, M. Gómez-Aranzadi, J.P. García-Ruiz, S.M. Olaizola, and **R.J Martín-Palma.**  
2016 MRS Fall Meeting, Boston (MA, USA), November 27-December 2, 2016 (invited).
143. *Fabricación de nano y microestructuras basadas en silicio poroso para aplicaciones en micro- y opto-fluídica.*  
L. Cencha, **R.J. Martín-Palma**, R. Urteaga y C. Berli.  
101 Reunión de la Asociación Física Argentina, San Miguel de Tucumán (Argentina), October 4-7, 2016 (poster).
142. *Laser-structured porous silicon: from biosensors to cell culture.*  
R.J. Peláez, G. Recio, F. Vega, and **R.J. Martín-Palma.**  
E-MRS 2016 Spring Meeting and Exhibit, Lille (France), 2-6 May 2016 (oral).
141. *One- and two-dimensional surface patterns fabricated by UV laser interference on nanoporous silicon for biological applications.*  
G. Recio-Sánchez, V. Torres-Costa, R. Peláez, C.N. Afonso, F. Vega, and **R.J. Martín-Palma.**  
Porous Semiconductors - Science and Technology, 8th International Conference PSST-2016, Tarragona (Spain), March 6-11, 2016 (poster).
140. *Ingeniería biomimética: bioinspiración, biomimética y biorreplicación.*  
**R.J. Martín-Palma.**  
Jornadas V Escuela Venezolana de Óptica, Universidad Simón Bolívar – Sede Litoral (Venezuela), 1-3 December 2015 (Invited talk).
139. *Silicio poroso nanoestructurado: de la fotónica a la biomedicina.*  
**R.J. Martín-Palma.**  
LXV Convención Anual de la ASOVAC, Universidad Simón Bolívar – Sede Litoral (Venezuela), 30 November-3 December 2015 (Plenary talk).
138. *Nanoporous silicon-based platforms for biological applications fabricated by UV laser techniques.*  
G. Recio-Sánchez, R.J. Peláez, C.N. Afonso, F. Vega, and **R.J. Martín-Palma.**  
228th ECS meeting, Phoenix (AZ, USA), October 11-15, 2015 (oral).
137. *Hydrophobic functionalization of porous silicon photoluminescent structures.*  
P. Laplace, P. Pellacani, C. Rodríguez, D. Gallach, **R.J. Martín-Palma**, V. Torres-Costa, and M. Manso-Silván

- NANOSMAT Conference, Manchester (United Kingdom), 13-16 September 2015 (oral).
136. *Light emission from compound-eye cornea with conformal fluorescent coating.*  
**R.J. Martín-Palma**, A. Miller, D.P. Pulsifer, and A. Lakhtakia.  
“Bioinspiration, Biomimetics, and Bioreplication V” conference (part of SPIE Smart Structures/NDE), San Diego, CA, USA, 8-12 March 2015 (oral).
135. *Where should I submit my next paper?*  
**R.J. Martín-Palma.**  
Winter School “From PhD to Business. Management Know How for Engineers and Scientists”, Miraflores de la Sierra (Spain), February 2-6, 2015 (invited lecture).
134. *Fundamentals of nanotechnology.*  
**R.J. Martín-Palma.**  
7th meeting of Photonics and Optics, Salamanca (Guanajuato, México), 24-26 September 2014 (inaugural lecture).
133. *UV laser fabrication of nanostructured porous silicon based platforms for biological applications.*  
G. Recio-Sánchez, R.J. Pelaez, C.N. Alfonso, F. Vega, and **R.J. Martín-Palma.**  
III Conferencia Nacional de Nanotecnología, Puerto Varas (Chile), September 10-12, 2014 (oral).
132. *Fine-scale features on bioreplicated decoys of the emerald ash borer provide necessary visual verisimilitude.*  
M.J. Domingue, D.P. Pulsifer, M.S. Narkhede, L.G. Engel, **R.J. Martín-Palma**, J. Kumar, T.C. Baker, and Akhlesh Lakhtakia.  
“Bioinspiration, Biomimetics, and Bioreplication IV” conference (part of SPIE Smart Structures/NDE), San Diego, CA, USA, 9-13 March 2014 (oral).
131. *Design of porous silicon patterns by ion-beam techniques for cell studies.*  
E. Punzón-Quijorna, **R.J. Martín-Palma**, M. Manso-Silván, A. Climent-Font, J.P. García-Ruiz, and V. Torres-Costa.  
Young researchers meeting INC 2013, Miraflores de la Sierra (Madrid, Spain), December 19, 2013 (oral).
130. *Progress Toward Visual Decoys to Trap the Male Emerald Ash Borer.*  
D.P. Pulsifer, A. Lakhtakia, M.S. Narkhede, M.J. Domingue, B.G. Post, J. Kumar, **R.J. Martín-Palma**, and Thomas C. Baker.  
“Bioinspiration, Biomimetics, and Bioreplication III” conference (part of SPIE Smart Structures/NDE), San Diego, CA, USA, 10-14 March 2013 (oral).
129. *Liquid crystals alignment in nanoporous materials.*  
I. Abdulhalim, H. Reisman, D.P. Pulsifer, V. Torres-Costa, **R.J. Martín-Palma**, and A. Lakhtakia.  
COINAPO 2012 Meeting, Rehovot (Israel), 19-21 November 2012 (invited).
128. *Bioinspiration, biomimetics, and bioreplication for harvesting solar energy.*  
Akhlesh Lakhtakia and **Raúl J. Martín-Palma.**  
Frontiers in Optics 2012/Laser Science XXVIII Conference, Rochester (NY,

- USA), 14-18 October 2012 (invited).
127. *Fluorescence and Raman characterization of a transport system formed by the anti tumoral drug emodin, silver nanoparticles and porous silicon.*  
P. Sevilla, M. Hernandez, G. Recio, E. Corda, **R.J. Martín-Palma**, J.V. García-Ramos, and C. Domingo.  
Trends in Nanotechnology International Conference (TNT2012), Madrid (Spain), 10-14 September 2012 (oral).
126. *Fluorescencia intensificada por nanoparticulas de plata (SEF) del fármaco antitumoral emodina en una matriz de silicio poroso.*  
M. Hernandez, G. Recio, **R.J. Martín-Palma**, J.V. García-Ramos, C. Domingo and P. Sevilla.  
X Reunión Nacional de Óptica, Zaragoza (Spain), 4-7 September 2012 (oral).
125. *Au electrodeposition into nanostructured porous silicon for the fabrication of thin film Si-based plasmonic solar cells.*  
G. Recio-Sánchez, S. Sánchez de la Morena, V. Torres-Costa, and **R.J. Martín-Palma**.  
14th International Conference-School "Advanced Materials and Technologies", Palanga (Lithuania), 27-31 August 2012 (poster).
124. *Alignment of liquid crystals in nanoporous photonic crystals.*  
H. Reisman, D.P. Pulsifer, V. Torres-Costa, **R.J. Martín-Palma**, A. Lakhtakia, and I. Abdulhalim.  
24th International Liquid Crystal Conference (ILCC 2012), Mainz (Germany), 19-24 August 2012 (oral).
123. *On alignment of liquid crystals in chiral sculptured thin films.*  
H. Reisman, D.P. Pulsifer, **R.J. Martín-Palma**, A. Lakhtakia, R. Dabrowski, and I. Abdulhalim.  
"Nanostructured Thin Films V" conference (part of the SPIE Symposium on SPIE NanoScience + Engineering), San Diego (CA, USA), 12-16 August 2012 (poster).
122. *Development of drug delivery systems based on nanostructured porous silicon loaded with the anti-tumoral drug emodin adsorbed on silver nanoparticles.*  
M. Hernández, G. Recio, P. Sevilla, V. Torres-Costa, J.V. García-Ramos, C. Domingo, and **R.J. Martín-Palma**.  
"Nanostructured Thin Films V" conference (part of the SPIE Symposium on SPIE NanoScience + Engineering), San Diego (CA, USA), 12-16 August 2012 (oral).
121. EXAFS study of ZnO films on porous silicon and its optimized green photoluminescence.  
D. Gallach, M. Manso-Silván, A. Muñoz-Noval, V. Torres-Costa, and **R.J. Martín-Palma**.  
E-MRS 2012 Spring Meeting, Strasbourg (France), May 14-18, 2012 (oral).
120. *Optimization of cyclic calcium phosphate deposition on porous silicon: from spin coating to electrochemical activation.*  
J. Hernández-Montelongo, D. Gallach, A. Climent-Font, V. Torres-Costa, **R.J. Martín-Palma**, and M. Manso-Silván.



- E-MRS 2012 Spring Meeting, Strasbourg (France), May 15-17, 2012 (oral).
119. *Building uniaxial guides for mesenchymal cells, by selectively implanting MeV carbon ions and molecules.*  
E. Punzón-Quijorna, V. Sánchez-Vaquero, V. Torres-Costa, M. Manso-Silván, **R.J. Martín-Palma**, J.P. García-Ruiz, D. Martín y Marero, and A. Climent-Font.  
E-MRS 2012 Spring Meeting, Strasbourg (France), May 15-17, 2012 (oral).
118. *Laser structured porous silicon based platforms.*  
R.J. Peláez, C.N. Afonso, F. Vega, G. Recio-Sánchez, V. Torres-Costa, and **R.J. Martín-Palma**.  
E-MRS 2012 Spring Meeting, Strasbourg (France), May 15-17, 2012 (oral).
117. *Design and characterization of biofunctional magnetic porous silicon flakes.*  
Á. Muñoz-Noval, R. García-Mendoza, V. Sánchez-Vaquero, M.Á. García García-Tuñón, V. Torres-Costa, **R.J. Martín-Palma**, JJ. Serrano, and M. Manso-Silván  
E-MRS 2012 Spring Meeting, Strasbourg (France), May 15-17, 2012 (oral).
116. *Fluorescence characterization of a drug delivery system based on a nanostructured porous silicon matrix loaded with the anti-tumoral drug emodin adsorbed on silver nanoparticles.*  
M. Hernandez, G. Recio, **R.J. Martín-Palma**, V. Torres-Costa, J.V. García-Ramos, C. Domingo, and P. Sevilla.  
Porous Semiconductors - Science and Technology, 8th International Conference PSST-2012, Málaga (Spain), March 25-30, 2012 (poster).
115. *Photonic crystal slabs based on nanostructured porous silicon.*  
G. Recio, V. Torres, Z. Y. Dang, M. B. Breese, and **R.J. Martín-Palma**.  
Porous Semiconductors - Science and Technology, 8th International Conference PSST-2012, Málaga (Spain), March 25-30, 2012 (poster).
114. *Characterization of hybrid cobalt-porous silicon systems: protective effect of the matrix in the metal oxidation.*  
A. Muñoz-Noval, V. Torres, **R.J. Martín-Palma**, M.A. Garcia García-Tunon, K. Fukami, Y.H. Ogata, P. Herrero, and M. Manso-Silván.  
Porous Semiconductors - Science and Technology, 8th International Conference PSST-2012, Málaga (Spain), March 25-30, 2012 (poster).
113. *Photonic structures fabricated using ion irradiation combined with electrochemical anodisation.*  
Z. Y. Dang, M. B. Breese, G. Recio, J. Song, S. Azimi, H. D. Liang, A. Banas, and **R.J. Martín-Palma**.  
Porous Semiconductors - Science and Technology, 8th International Conference PSST-2012, Málaga (Spain), March 25-30, 2012 (oral).
112. *Porous silicon micropatterns as a tool for cell migration research.*  
E. Punzón-Quijorna, V. Sánchez-Vaquero, V. Torres-Costa, M. Manso-Silván, J.P. García-Ruiz, **R.J. Martín-Palma**, and A. Climent-Font.  
Porous Semiconductors - Science and Technology, 8th International Conference PSST-2012, Málaga (Spain), March 25-30, 2012 (oral).
111. *Toward pest control via mass production of realistic decoys of insects.*

- D.P. Pulsifer, A. Lakhtakia, J. Kumar, T.C. Baker, and R.J. Martín-Palma.  
"Bioinspiration, Biomimetics, and Bioreplication II" conference (part of SPIE Smart Structures/NDE), San Diego, CA, USA, 11-15 March 2012 (oral).
110. *Visualization of Latent Fingerprints Using Columnar Thin Films.*  
Sarah A. Muhlberger, Robert Shaler, Drew P. Pulsifer, Akhlesh Lakhtakia, and **Raúl J. Martín-Palma.**  
64th Annual Scientific Meeting of American Academy of Forensic Sciences, Atlanta, GA (USA), February 20-25, 2012 (oral).
109. *Nanostructured porous silicon and its applications in the field of biomedicine.*  
V. Torres-Costa, A. Muñoz Noval, V. Sánchez-Vaquero, L. González-Méndez, G. Recio-Sánchez, E. Punzón-Quijorna, D. Gallach-Pérez, J. Hernández-Montelongo, M. Manso-Silván, A. Climent-Font, J.P. García-Ruiz, and **R.J. Martín-Palma.**  
NanoSensorPhotonics 2011, Dead Sea (Israel), 5-9 November 2011 (Plenary Invited Presentation).
108. *Optimal Conditions for Visualization of Fingerprints with the Conformal-Evaporated-Film-By-Rotation Technique.*  
D.P. Pulsifer, S. Muhlberger, **R.J. Martín-Palma**, R.A. Shaler, and A. Lakhtakia.  
AVS 58th International Symposium and Exhibition, Nashville (TN, USA), October 30-November 4, 2011 (oral).
107. *Optimized deposition of columnar thin films for visualization of latent fingerprints.*  
S.A. Muhlberger, D.P. Pulsifer, **R.J. Martín-Palma**, R. Shaler, and A. Lakhtakia.  
39th Annual Symposium of American Society of Crime Laboratory Directors, Denver (CO, USA), September 18-22, 2011 (poster).
106. *Controlled skeletal progenitor cell migration on nanostructured porous silicon/silicon micropatterns.*  
V. Torres-Costa, V. Sánchez-Vaquero, A. Muñoz-Noval, L. González-Méndez, E. Punzón-Quijorna, D. Gallach-Pérez, M. Manso-Silván, G. Martínez-Muñoz, A. Climent-Font, J.P. García-Ruiz, and **R.J. Martín-Palma.**  
"Nanostructured Thin Films IV" conference (part of the SPIE Symposium on SPIE NanoScience + Engineering), San Diego, CA, USA, 21-25 August 2010 (oral).
105. *Partículas híbridas luminiscentes y magnéticas basadas en silicio poroso nanoestructurado para aplicaciones biomédicas.*  
**R.J. Martín-Palma.**  
WorkShop Fotónica en la Comunidad de Madrid, Madrid (Spain), 18 May 2011 (oral).
104. *Functionality of porous silicon submicrometer particles: iron infiltration and particle surface modification for biomedical applications.*  
D. Gallach, A. Muñoz-Noval, V. Ferro, V. Torres-Costa, M. Manso-Silván, **R. J. Martín-Palma**, J.J. Serrano, F. del Pozo, and J.M. Martínez-Duart.  
E-MRS ICAM IUMRS 2011 Spring Meeting, Niza (France), 9-13 June 2011 (poster).

103. *Alternate calcium phosphate electrodeposition into nanostructured porous silicon.*  
J. Hernández-Montelongo, A. Muñoz-Noval, V. Torres-Costa, **R.J. Martín-Palma**, M. Manso-Silvan.  
E-MRS ICAM IUMRS 2011 Spring Meeting, Nice (France), 9-13 June 2011 (oral).
102. *Photonic crystals based on nanostructured porous silicon for infrared applications.*  
G. Recio-Sánchez, V. Torres-Costa, M. Manso-Silván, **R. J. Martín-Palma**.  
E-MRS ICAM IUMRS 2011 Spring Meeting, Nice (France), 9-13 June 2011 (poster).
101. *Engineered biomimicry: polymeric replication of surface features found on insects.*  
Drew P. Pulsifer, Akhlesh Lakhtakia, **Raúl J. Martín-Palma**, and Carlo G. Pantano.  
"Bioinspiration, Biomimetics, and Bioreplication" conference (part of SPIE Smart Structures/NDE), San Diego, CA, USA, 6-10 March 2011 (oral).
100. *Properties of multilayer electrical contacts to porous silicon sensor structures.*  
D. Gallach, L.G. Pelayo, V. Torres-Costa, M. Manso-Silván, **R.J. Martín-Palma**, A. Climent-Font.  
11th European Vacuum Conference EVC-11, Salamanca (España), 20-24 September 2010 (oral).
99. *Modification of the electrochemical properties of crystalline silicon by MeV silicon implantation.*  
V. Torres-Costa, M. Manso-Silván, E. Punzón-Quijorna, **R.J. Martín-Palma**, D. Martín-Marero, A. Climent-Font.  
10th European Conference on Accelerators in Applied Research and Technology ECAART '10, Athens (Greece), 13-17 September 2010 (oral).
98. *Columnar-thin-film acquisition of fingerprint topology.*  
R.C. Shaler, A. Lakhtakia, J.W. Rogers, D.P. Pulsifer, and **R.J. Martín-Palma**.  
"Nanostructured Thin Films III" conference (part of the SPIE Symposium on SPIE NanoScience + Engineering), San Diego, CA, USA, 1-5 August 2010 (Invited).
97. *Nanostructured porous silicon-based dual luminescent/magnetic particles for biomedical tracking.*  
A. Muñoz-Noval, V. Sánchez-Vaquero, V. Torres-Costa, D. Gallach, V. Ferro-Llanos, J.J. Serrano, F. del Pozo, M. Manso-Silván, J.P. Garcia-Ruiz, and **R.J. Martín-Palma**.  
"Nanostructured Thin Films III" conference (part of the SPIE Symposium on SPIE NanoScience + Engineering), San Diego, CA, USA, 1-5 August 2010 (oral).
96. *Electrochemical properties and structure of MeV irradiated crystalline p type <100> silicon.*  
V. Torres Costa, P. Herrero, M. Manso-Silván, E. Punzón Quijorna, **R.J. Martín Palma**, A. Landa, F. Agulló-Rueda, J. Hernández Velasco, D. Martín y Marero, J. M. Martínez Duart, and A. Climent-Font.  
Workshop on Dynamical processes in irradiated materials, San Sebastián (Spain), July 26-28, 2010 (poster).

95. *Dual luminescent/magnetic particles based on nanostructured porous silicon for biomedical tracking.*  
A. Muñoz-Noval, V. Sánchez-Vaquero, V. Torres-Costa, D. Gallach, V. Ferro-Llanos, J.J. Serrano, F. del Pozo, M. Manso-Silván, J.P. Garcia-Ruiz, and **R.J. Martín-Palma.**  
E-MRS 2010 Spring Meeting, Strasbourg (France), 7-11 June 2009 (oral).
94. *Surface porosity characterization of porous silicon layers by water contact angle technique.*  
A. Muñoz-Noval, M. Hernando-Pérez, M Manso-Silván, **R.J. Martín-Palma**, J.P. García-Ruiz, and V. Torres-Costa.  
7th International Conference "Porous Semiconductors-Science and Technology" (PSST-2006). Valencia (Spain), 14-19 March 2010 (poster).
93. *Inhibition of porous silicon growth by high energy silicon implantation.*  
V. Torres-Costa, M. Manso-Silván, E. Punzón-Quijorna, **R.J. Martín-Palma**, A. Climent-Font.  
7th International Conference "Porous Semiconductors-Science and Technology" (PSST-2006). Valencia (Spain), 14-19 March 2010 (oral).
92. *Towards the development of biomimetic optical devices.*  
D.P. Pulsifer, A. Lakhtakia, and **R.J. Martín-Palma.**  
Nanospain2010, Málaga (Spain), 23-26 March 2010 (oral).
91. *Modification of conformal-evaporated-film-by-rotation technique to improve replica uniformity on nonplanar biotemplates.*  
D.P. Pulsifer, A. Lakhtakia, and **R.J. Martín-Palma.**  
SPIE Symposium on SPIE MOEMS-MEMS: Micro- and Nanofabrication, SPIE Photonics West, San Francisco, CA (USA), 23-28 January 2010 (oral).
90. *Applications of nanostructured porous silicon in the field of chemical sensing and biosensing.*  
**R.J. Martín-Palma.**  
Workshop: New nanostructured materials and coatings, Madrid (Spain), October 28-29, 2009 (oral).
89. *Tunable filters based on porous silicon infiltration with liquid crystals.*  
S. Mor, V. Torres-Costa, **R.J. Martín-Palma**, and I. Abdulhalim.  
International Conference on the Optics of Liquid Crystals (OLC2009), Erice, Sicily (Italy), September 28-October 2 2009 (oral).
88. *Development of electrical biosensors and biomarkers based on nanostructured porous silicon.*  
G. Recio-Sánchez, D. Gallach, V. Torres-Costa, M. Manso and **R.J. Martín-Palma.**  
"Nanostructured Thin Films II" conference (part of the SPIE Symposium on SPIE NanoScience + Engineering), San Diego, CA, USA, 2-6 August 2009 (oral).
87. *Towards replication of the exoskeleton of Lamprocyphus augustus for photonic applications.*  
A. Lakhtakia, **R.J. Martín-Palma**, and C.G. Pantano.

- Biomimetics and Bioinspiration" conference (part of the SPIE Symposium on SPIE NanoScience + Engineering), San Diego, CA, USA, 2-6 August 2009 (oral).
86. *Functionality of porous silicon submicrometer particles; Fe infiltration and particle surface modification for biomedical applications.*  
D. Gallach, A. Muñoz-Noval, V. Ferro, V. Torres-Costa, M. Manso-Silván, R. J. Martín-Palma, J.J. Serrano, F. del Pozo, J.M. Martínez-Duart.  
E-MRS 2009 Spring Meeting, Strasbourg (France), 8-12 June 2009 (oral).
85. *Electrical biosensors based on nanostructured porous silicon.*  
G. Recio-Sánchez, D. Gallach, **R.J. Martín-Palma**, V. Torres-Costa, M. Manso and J.M. Martínez-Duart.  
E-MRS 2009 Spring Meeting, Strasbourg (France), 8-12 June 2009 (oral).
84. *Si MeV irradiation of silicon. Its effects on the growth of porous silicon.*  
A. Climent-Font, V. Torres-Costa, M. Manso, D. Martín-Marero, **R.J. Martín-Palma**, J.M. Martínez-Duart.  
Spring Meeting "Nicolas Cabrera", Miraflores de la Sierra, Madrid (Spain), May 18-21, 2009 (invited).
83. *Replication of biotemplates for the development of highly efficient biomimetic optical devices.*  
**R.J. Martín-Palma**, C.G. Pantano and A. Lakhtakia.  
Advanced Fabrication Technologies for Micro/Nano Optics and Photonics II" conference (part of the SPIE Symposium on MOEMS-MEMS: Micro- and Nanofabrication), San Jose, CA, USA, 24-29 January 2009 (invited).
82. *Replication of biotemplates with the conformal-evaporated-film-by-rotation technique for photonics.*  
**R.J. Martín-Palma**, C.G. Pantano and A. Lakhtakia.  
2008 NSF Nanoscale Science and Engineering Grantees Conference, Arlington, VA, USA, December 3-5, 2008 (poster).
81. *Conformal-evaporated-film-by-rotation technique for hi-fi replicas of biotemplates for photonics.*  
**R.J. Martín-Palma**, C.G. Pantano and A. Lakhtakia.  
Center for Optical Technologies Open House, Lehigh University, PA, USA, 13-14 October, 2008 (poster).
80. *Applications of nanostructured porous silicon in the field of optical sensing.*  
**R.J. Martín-Palma**, V. Torres-Costa and J.M. Martínez-Duart.  
Nanostructured Thin Films" conference (part of the SPIE Symposium on NanoScience + Engineering), San Diego, CA, USA, 10-14 August 2008 (oral).
79. *Nanostructured porous silicon and its applications.*  
**R.J. Martín-Palma**.  
CISP 2008 Industry Member Meeting, State College (PA, USA), April 16-17 2008 (invited talk).
78. *GeSbSe chalcogenide thin films grown at glancing angle for chemical and biosensing.*  
**R.J. Martín-Palma**, J.V. Ryan and C.G. Pantano.

SPIE's International Symposium on Biomedical Optics (BiOS) 2007, San Jose (CA, USA), 20-25 January 2007.

77. *Biosensors Based on Chalcogenide Optical Structures Grown by Glancing Angle Deposition.*  
**R.J. Martín-Palma**, J.V. Ryan and C.G. Pantano.  
International Materials Institute Day and National Science Foundation Site Visit, Lehigh University, Bethlehem (PA, USA), October 16-17, 2007 (poster).
76. *Characterization of GeSbSe chalcogenide thin films grown by GLAD.*  
**R.J. Martín-Palma**, J.V. Ryan and C.G. Pantano.  
International Materials Institute Day and National Science Foundation Site Visit, Lehigh University, Bethlehem (PA, USA), October 16-17, 2007 (invited).
75. *Photonic crystals based on nanostructured porous silicon.*  
**R.J. Martín-Palma**, M. Manso, V. Torres-Costa and J.M. Martínez-Duart.  
E-MRS 2007 Spring Meeting. Strasbourg (France), May 28-June 1, 2007 (oral).
74. *Recent approaches to sensors based on porous silicon 2D photonic crystals: models, fabrication and surface functionalization.*  
M. Manso-Silván, **R.J. Martín-Palma**, V. Torres-Costa, M. Arroyo-Hernández, J.M. Martínez Duart.  
Workshop on Physics of Sensors and Detection Systems, Ispra (Italy), December 4-6, 2006 (Invited).
73. *Spectrally selective photodetectors based on porous silicon multilayer stacks.*  
V. Torres-Costa, **R.J. Martín-Palma** and J.M. Martínez-Duart.  
E-MRS 2005 Spring Meeting. Nice (France), May 29-June 2, 2005 (oral).
72. *Porous silicon based structures for electrical biosensing.*  
J. López-García, **R.J. Martín-Palma**, M. Manso and J.M. Martínez-Duart.  
E-MRS 2005 Spring Meeting. Nice (France), May 29-June 2, 2005 (poster).
71. *Multicapas de silicio nanoestructurado para aplicaciones optoelectrónicas.*  
V. Torres-Costa, **R.J. Martín-Palma**, F. Agulló-Rueda, J.M. Martínez-Duart.  
IX Congreso Nacional de Materiales. Vigo (Spain), June 20-22 2006 (oral).
70. *Color sensitive photodetectors based on porous silicon multilayer stacks.*  
V. Torres-Costa, **R.J. Martín-Palma**, and J.M. Martínez-Duart.  
5th International Conference "Porous Semiconductors-Science and Technology" (PSST-2006). Sitges (Spain), March 12-17 2006 (poster).
69. *In-depth RBS study of interference filters based on nanostructured silicon.*  
V. Torres-Costa, F. Paszti, A. Climent-Font, **R.J. Martín-Palma** and J.M. Martínez-Duart.  
First Conference on Advances in Optical Materials. Tucson (Arizona, USA), October 12–15 2005 (oral).
68. *Applications of porous silicon in the field of optical biosensing.*  
**R.J. Martín-Palma**, V. Torres-Costa, M. Arroyo-Hernández, M. Manso, J. Pérez-Rigueiro and J.M. Martínez-Duart.  
First Conference on Advances in Optical Materials. Tucson (Arizona, USA),

October 12–15 2005 (oral).

67. *HRTEM analysis of the nanostructure of porous silicon.*  
**R.J. Martín-Palma**, L. Pascual, A. Landa, P. Herrero, J.M. Martínez-Duart.  
E-MRS 2005 Spring Meeting. Strasbourg (France), May 31-3 June 2005 (poster).
66. *Edge dislocations in porous silicon.*  
L. Pascual, A.R. Landa-Cánovas, **R.J. Martín-Palma**, J.M. Martínez-Duart and P. Herrero.  
The thirteenth European Microscopy Congress (EMC 2004). Groenenborger complex, (Belgium), August 22-27, 2004 (poster).
65. *Photoluminescence of naphthalimides over nanostructured porous silicon.*  
E. Martín, C. Bousoño, **R.J. Martín-Palma** and J.M. Martínez-Duart  
XX IUPAC Symposium on photochemistry. Granada (Spain), July 17-22, 2004 (poster).
64. *Structural modification of silicon during the formation process of porous silicon.*  
**R.J. Martín-Palma**, J.M. Martínez-Duart, L. Pascual, A. Landa and P. Herrero.  
E-MRS 2004 Spring Meeting. Strasbourg (France), May 24-28, 2004 (poster).
63. *DNA immobilization on porous silicon surfaces.*  
M. Arroyo-Hernández, **R.J. Martín-Palma**, J. Pérez-Rigueiro, J.P. García-Ruiz and J.M. Martínez-Duart.  
E-MRS 2004 Spring Meeting. Strasbourg (France), May 24-28, 2004 (oral).
62. *Porous silicon optical devices for DNA sensing applications.*  
V. Torres-Costa, F. Agulló-Rueda, **R.J. Martín-Palma** and J.M. Martínez-Duart.  
E-MRS 2004 Spring Meeting. Strasbourg (France), May 24-28, 2004 (poster).
61. *Optical biosensing applications of porous silicon.*  
**R.J. Martín-Palma**, M. Arroyo-Hernández, V. Torres-Costa, J. Pérez-Rigueiro, J.M. Martínez-Duart.  
The Eight World Congress on Biosensors, Granada (Spain), May 24-26 2004 (oral).
60. *Porosity profile determination of porous silicon interference filters by RBS.*  
V. Torres-Costa, F. Pászti, A. Climent-Font, R.J. Martín-Palma and J.M. Martínez-Duart.  
Porous Semiconductors – Science and Technology, Fourth International Conference, Cullera (España), 14-19 marzo 2004 (oral).
59. *Biofunctionalization of porous silicon by APTS solutions.*  
M. Arroyo-Hernández, **R.J. Martín-Palma**, J. Pérez-Rigueiro, J.P. García-Ruiz and J.M. Martínez-Duart.  
Porous Semiconductors – Science and Technology, Fourth International Conference, Cullera (España), 14-19 marzo 2004 (poster).
58. *Determinación del desajuste del parámetro de red en la interfase Si/Si poroso (Determination of lattice mismatch in the Si/porous Si interface).*  
L.G. Pascual, **R.J. Martín-Palma**, J.M. Martínez-Duart y P. Herrero.  
XXI Reunión Bienal de la Sociedad de Microscopía de España, Cádiz (Spain),

September 28-October 1 2003 (oral).

57. *Applications of ion beam techniques to the characterization of porous silicon multilayer structures.*  
V. Torres-Costa, F. Paszti, A. Climent-Font, **R.J. Martín-Palma** and J.M. Martínez-Duart.  
New trends in ion beam physics and applications: a road to nanoechnologies, Miraflores de la sierra (Spain), September 15-19 2003 (poster).
56. *Propiedades y aplicaciones del silicio nanoestructurado. (Properties and applications of nanostructured silicon).*  
J.M. Martínez Duart, **R.J. Martín Palma**, M. Arroyo Hernández, V. Torres Costa y J. Tutor.  
XX Reunión Nacional de la Sociedad Colombiana de Física, Armenia (Colombia), September 1-5 2003 (plenary conference).
55. *Development of biointerfaces onto porous silicon.*  
M. Arroyo-Hernández, **R.J. Martín-Palma**, J. Pérez-Rigueiro, J.P. García-Ruiz, J.L. García-Fierro and J.M. Martínez-Duart  
European Congress on Advanced Materials and Processes (EUROMAT 2003), Lausanne (Switzerland), September 1-5, 2003 (poster).
54. *Multilayer porous silicon structures for optical devices.*  
V. Torres-Costa, **R.J. Martín-Palma**, R. Gago-Fernández, M. Vinnichenko and J.M. Martínez-Duart  
European Congress on Advanced Materials and Processes (EUROMAT 2003), Lausanne (Switzerland), September 1-5, 2003 (lecture).
53. *Porous silicon antireflection coatings for silicon solar cells.*  
V. Torres-Costa, R. Serna, R. Gago, **R.J. Martín-Palma**, M. Arroyo-Hernández and J.M. Martínez-Duart  
First SWH (Solar, Wind, Hydrogen and Fuel Cells) International Conference, Segovia (Spain), July 7-10, 2003 (poster).
52. *Porous silicon antireflection coatings for multicrystalline silicon solar cells.*  
J.M. Martínez-Duart, N. Marrero, F. Ben-Hander, R. Guerrero-Lemus, **R.J. Martín-Palma**, V. Torres-Costa and M. Arroyo-Hernández  
First SWH (Solar, Wind, Hydrogen and Fuel Cells) International Conference, Segovia (Spain), July 7-10, 2003 (keynote presentation).
51. *Heavy Ion ERDA and He-RBS at SiOC:H hard coatings for polymeric lenses.*  
U. Kreissig, R. Gago, M. Vinnichenko, **R.J. Martín-Palma**, J.M. Martínez-Duart, P. Fernández-Hidalgo.  
16th International Conference on Ion Beam Analysis (IBA2003). Albuquerque (USA), June 29-July 4 2003 (poster).
50. *Development of interference filters based on multilayer porous silicon structures.*  
V. Torres-Costa, R. Gago-Fernández, **R.J. Martín-Palma**, M. Vinnichenko and J.M. Martínez-Duart  
E-MRS 2003 Spring Meeting. Strasbourg (France), June 10-13, 2003 (poster).
49. *Bio-functionalization of porous silicon nanostructured surfaces.*



- M. Arroyo-Hernández, **R.J. Martín-Palma**, J. Pérez-Rigueiro, J.P. García-Ruiz, J.L. García-Fierro and J.M. Martínez-Duart  
E-MRS 2003 Spring Meeting. Strasbourg (France), June 10-13, 2003 (oral).
48. *Electrochemical formation of porous polySiGe nanostructures.*  
T. Del Caño, M. Avella, J. Jiménez, V. Torres-Costa, **R.J. Martín-Palma**, J.M. Martínez-Duart, J. Sangrador, A. Rodríguez and T. Rodríguez.  
203rd Meeting of The Electrochemical Society, Paris (France), April 27-May 2, 2003 (oral).
47. *Biosensing applications of porous silicon.*  
**R.J. Martín-Palma**, V. Torres-Costa, M. Arroyo-Hernández, M. Manso, J. Pérez-Rigueiro and J.M. Martínez-Duart  
III Taller Iberoamericano de Nanoestructuras con aplicaciones a la Micro y Optoelectronica, Madrid (Spain), March 24-28 2003 (Invited talk).
46. *Porous poly-SiGe nanostructures formed by electrochemical processes.*  
T. Del Cano, M. Avella, J. Jiménez, V. Torres-Costa, **R.J. Martín-Palma**, J.M. Martínez-Duart, J. Sangrador, A. Rodríguez and T. Rodríguez.  
Materials Research Society 2002 Fall Meeting, Boston (USA), December 2-6, 2002 (poster).
45. *In-depth thin film characterization techniques of industrial multilayer structures.*  
J.M. Martínez-Duart and **R.J. Martín-Palma**.  
AIMCAL 2002 Fall Technical Conference & 16th International Vacuum Web Coating Conference. Sedona (USA), October 21-23, 2002 (Invited talk).
44. *Desarrollo de filtros interferenciales para emisores fotoluminiscentes basados en silicio poroso. (Development of interference filters for photoluminescent emitters based on porous silicon).*  
V. Torres Costa, S. Manotas, **R.J. Martín Palma**, F. Agulló Rueda y J.M. Martínez Duart.  
VII Congreso Nacional de Materiales, Madrid (Spain), October 16-18, 2002 (oral).
43. *Caracterización óptica y estructural de recubrimientos antirreflejantes multicapa. (Optical and structural characterization of multilayer antireflective coatings).*  
**R.J. Martín Palma**, P. Fernández Hidalgo, I. García, R. Gago, V. Torres Costa y J.M. Martínez Duart.  
VII Congreso Nacional de Materiales, Madrid (Spain), October 16-18, 2002 (oral).
42. *Development of interference filters for porous silicon based photoluminescent emitters.*  
**R.J. Martín-Palma**, S. Manotas, V. Torres-Costa, F. Agulló-Rueda and J.M. Martínez-Duart.  
Materials Week. International Congress on Advanced Materials, their Processes and Applications. Munich (Germany), September 30-October 2, 2002 (poster).
41. *Direct determination of lattice parameters and mismatch of porous silicon nanocrystals.*  
**R.J. Martín-Palma**, L. Pascual, P. Herrero and J.M. Martínez-Duart.

- 3rd International Conference "Porous Semiconductors – Science and Technology", Puerto de la Cruz (Spain), March 11-15, 2002 (poster).
40. *Porous silicon based photodetectors and solar cells.*  
J.M. Martínez-Duart and **R.J. Martín-Palma**.  
NANO'2001. São José dos Campos (Brazil), November 26-30, 2001 (Invited talk).
  39. *Characterization of silver-based solar control multilayer coatings for architectural windows.*  
**R.J. Martín-Palma** and J.M. Martínez-Duart.  
AIMCAL 2001 Fall Technical Conference & 15th International Vacuum Web Coating Conference. Hilton Head Island (USA), October 22-24, 2001 (Invited talk).
  38. *Porous silicon interfaces: Properties and applications to optoelectronic devices.*  
J.M. Martínez-Duart, **R.J. Martín-Palma**, L. Vázquez, F. Agulló-Rueda y R. Guerrero-Lemus.  
XXI Congreso Nacional de la Sociedad Mexicana de Ciencia de Superficies y Vacío A.C. Mazatlán (México), October 1-5, 2001 (Invited talk).
  37. *Optoelectronic devices based on double-sided nanocrystalline silicon structures.*  
**R.J. Martín-Palma**, J.M. Martínez-Duart, L. Li and R.A. Levy.  
Trends in Nanotechnology (TNT2001). Segovia (Spain), September 3-7, 2001 (poster).
  36. *BaTiO<sub>3</sub> thin films obtained by sol-gel spin coating.*  
M. Manso-Silván, L. Fuentes-Cobas, **R.J. Martín-Palma**, M. Hernández-Vélez and J.M. Martínez-Duart.  
E-MRS 2001 Spring Meeting. Estrasburgo (France), 5-8 June, 2001 (poster).
  35. *Surface activation by the sol-gel fixation of amino groups.*  
M. Manso, **R.J. Martín-Palma**, J.M. Martínez-Duart and J. Pérez-Rigueiro.  
E-MRS 2001 Spring Meeting. Strasbourg (France), 5-8 June 2001 (oral).
  34. *Determination of the optical constants of silicon oxynitride films for optical coatings.*  
**R.J. Martín-Palma**, J.M. Martínez-Duart, L. Li and R.A. Levy.  
E-MRS 2001 Spring Meeting. Strasbourg (France), 5-8 June 2001 (poster).
  33. *Double-sided metal/porous silicon structures for optoelectronic devices.*  
**R.J. Martín-Palma**, J.M. Martínez-Duart, L. Li and R.A. Levy.  
E-MRS 2001 Spring Meeting. Strasbourg (France), June 5-8, 2001 (oral).
  32. *Caracterización y desarrollo de nanoestructuras de silicio para el desarrollo de dispositivos optoelectrónicos.*  
**R.J. Martín Palma**.  
IV jornada científica del Instituto Universitario de Ciencia de Materiales "Nicolás Cabrera". Madrid (Spain), November 24, 2000 (Invited conference).
  31. *Porous silicon optoelectronic devices.*  
J.M. Martínez-Duart, R.J. Martín-Palma, O. Sánchez-Garrido and M. Hernández-

Vélez.

Primer taller Iberoamericano de nanoestructuras para aplicación en la micro y optoelectrónica. Mexico D.F. (Mexico), November 15-18, 2000 (Invited conference).

30. *Photodiodes and solar cells based on nanostructured silicon.*

**R.J. Martín-Palma** and J.M. Martínez-Duart.

Trends in Nanotechnology (TNT'2000). Toledo (Spain), October 17-20, 2000 (Invited conference).

29. *Optical properties of CdS nanoparticles grown in Al-MCM-41 materials.*

M. Hernández-Vélez, I. Díaz, **R. J. Martín-Palma**, H. Villavicencio-García, J. Pérez-Pariente, and J. M. Martínez-Duart.

E-MRS 2000 Spring Meeting. Strasbourg (France), May 30-June 2, 2000 (poster).

28. *Optical, electrical and morphological characterization of porous silicon coatings for solar cells.*

**R.J. Martín-Palma**, L. Vázquez, P. Herrero, J.M. Martínez-Duart, M. Schnell and S. Schaefer.

E-MRS 2000 Spring Meeting. Strasbourg (France), May 30-June 2, 2000 (oral).

27. *Depth-resolved micro-spectroscopy of porous silicon multilayers.*

S. Manotas, F. Agulló-Rueda, J.D. Moreno, **R.J. Martín-Palma**, R. Guerrero-Lemus and J.M. Martínez-Duart

Materials Research Society 1999 Fall Meeting. Boston (USA), November 29-December 3, 1999 (oral).

26. *Industrial development of low-emissivity optical multilayer coatings for energy-saving applications.*

**R.J. Martín-Palma** and J.M. Martínez-Duart.

13th International Conference on Vacuum Web Coating. Tucson (USA), October 17-19, 1999 (Invited Conference).

25. *Optical properties of antireflecting coatings of stain etched porous silicon.*

J.D. Moreno, F. Ben-Hander, **R.J. Martín-Palma**, J.M. Martínez-Duart, M.L. Marcos, J. González-Velasco, P. Gómez-Garrido and R. Guerrero-Lemus.

8th European Conference on Applications of Surface and Interface Analysis (ECASIA'99). Sevilla (Spain), October 4-8, 1999 (poster).

24. *Optoelectronic behaviour of metallic contacts to nanostructured silicon.*

**R.J. Martín-Palma**, J. Pérez-Rigueiro, R. Guerrero-Lemus, J.D. Moreno and J.M. Martínez-Duart

8th European Conference on Applications of Surface and Interface Analysis (ECASIA'99). Sevilla (Spain), October 4-8, 1999 (poster).

23. *Preparation and applications of advanced thin films*

J.M. Martínez-Duart, O. Sánchez-Garrido and **R.J. Martín-Palma**.

11th International Conference on Thin Films. Cancún (Mexico), August 30 - September 3, 1999 (Course).

22. *Determinación de las propiedades ópticas de películas semiconductoras y*

- metálicas para su utilización en recubrimientos multicapa de baja emisividad. (Determination of the optical behaviour of semiconductor and metallic films for their use in low-emissivity coatings).*  
**R.J. Martín-Palma**, J.M. Martínez-Duart and A. Malats i Riera.  
VI Reunión Nacional de Materiales. San Sebastián (Spain), June 22-24, 1999 (poster).
21. *Development and characterization of porous silicon based solar sensors and cells.*  
**R.J. Martín-Palma**, R. Guerrero-Lemus, J.D. Moreno and J.M. Martínez-Duart.  
E-MRS 1999 Spring Meeting. Strasbourg (France), June 1-4, 1998 (oral).
20. *TEM characterization of cross-section porous silicon superlattices.*  
**R.J. Martín-Palma**, R. Guerrero-Lemus, J.D. Moreno, J.M. Martínez-Duart and P. Herrero.  
14<sup>th</sup> International Congress on Electron Microscopy. Cancún (Mexico), August 31-September 4, 1998 (oral).
19. *TEM study of metallic contacts to porous silicon.*  
**R.J. Martín-Palma**, P. Herrero, R. Guerrero-Lemus, J.D. Moreno and J.M. Martínez-Duart.  
14th International Congress on Electron Microscopy. Cancún (Mexico), August 31-September 4, 1998 (poster).
18. *Solar nanosensor for the nanosat mission.*  
**R.J. Martín-Palma**, R. Guerrero-Lemus, J.D. Moreno and J.M. Martínez-Duart.  
Jornadas sobre el estado y las aplicaciones de las micro/nanotecnologías, Madrid (Spain), June 29-30, 1998 (oral).
17. *Spectral characterization of porous silicon based photodiodes.*  
**R.J. Martín-Palma**, R. Guerrero-Lemus, J.D. Moreno and J.M. Martínez-Duart.  
E-MRS 1998 Spring Meeting. Strasbourg (France), June 16-19, 1998 (oral).
16. *Influence of post-etching treatments in the photoluminescence of porous silicon.*  
R. Guerrero-Lemus, J.D. Moreno, **R.J. Martín-Palma** and J.M. Martínez-Duart.  
E-MRS 1998 Spring Meeting. Strasbourg (France), June 16-19, 1998 (oral).
15. *The origin of liquid-phase electroluminescence from porous silicon.*  
J.D. Moreno, R. Guerrero-Lemus, **R.J. Martín-Palma**, J.M. Martínez-Duart, M.L. Marcos and J. González-Velasco.  
E-MRS 1998 Spring Meeting. Strasbourg (France), June 16-19, 1998 (poster).
14. *Electrochemical behaviour of porous silicon multi-layers.*  
R. Guerrero-Lemus, F.A. Ben-Hander, J.D. Moreno, **R.J. Martín-Palma**, J.M. Martínez-Duart, M.L. Marcos and J. González-Velasco.  
E-MRS 1998 Spring Meeting. Strasbourg (France), June 16-19, 1998 (poster).
13. *Behaviour of aluminium Schottky contacts to porous silicon.*  
**R.J. Martín-Palma**, J. Pérez-Rigueiro, R. Guerrero-Lemus, J.D. Moreno and J.M. Martínez-Duart  
Porous Semiconductors: Science and Technology. Mallorca (Spain), March 16-20, 1998 (poster).

12. *Investigación desarrollada en el grupo de Láminas Delgadas. (Research in the Applied Physics Thin Film Group).*  
J.M. Martínez-Duart, G. García-Ayuso, R. Guerrero-Lemus, A. Gutiérrez-Llorente, G. Hueso, C. Jiménez, M. Manso, J. Márquez, , **R.J. Martín-Palma**, J.D. Moreno y R. Pérez-Casero.  
Journées franco-espagnoles en nouveaux matériaux. Grenoble (France), November 27-29, 1997 (poster).
11. *Sputtered silver and tin oxide coatings for energy-efficient architectural windows.*  
J.M. Martínez-Duart and **R.J. Martín-Palma**.  
11th International Vacuum Web Coating Conference. Miami (USA), November 9-11, 1997 (Invited Conference).
10. *Applications of nanostructured porous silicon multilayers to Si-based photodetectors.*  
R. Guerrero-Lemus, **R.J. Martín-Palma**, J.D. Moreno, J.M. Martínez-Duart and P. Gómez.  
2nd Round Table on Micro/Nano-Technologies for Space. Noordwijk (The Netherlands), October 15-17, 1997 (poster).
9. *Solar sensor using nanoporous silicon for the NANOSAT mission.*  
**R.J. Martín-Palma**, R. Guerrero-Lemus, J.D. Moreno, J.M. Martínez-Duart, T. Belenguer, A. Romera and D. Levy.  
2nd Round Table on Micro/Nano-Technologies for Space. Noordwijk (The Netherlands), October 15-17, 1997 (oral).
8. *Aplicaciones de multicapas de silicio poroso a fotodetectores basados en silicio. (Applications of Porous Silicon multilayer stacks to Silicon-based photodetectors).*  
P. Gómez, R. Guerrero Lemus, **R.J. Martín Palma**, J.D. Moreno and J.M. Martínez Duart. XXVI Reunión bienal de la Real Sociedad Española de Física. Las Palmas de Gran Canaria (Spain), September 29-October 3, 1997 (oral).
7. *Propiedades fotodetectoras de uniones metal-silicio poroso. (Photosensing properties of metal-porous silicon junctions).*  
**R.J. Martín Palma**, R. Guerrero Lemus, J.D. Moreno and J.M. Martínez Duart. XXVI Reunión bienal de la Real Sociedad Española de Física. Las Palmas de Gran Canaria (Spain), September 29-October 3, 1997 (oral).
6. *Electric and photoelectric properties of metal/porous silicon Schottky structures.*  
**R.J. Martín-Palma**, R. Guerrero-Lemus, J.D. Moreno and J.M. Martínez-Duart.  
7th European Conference on Applications of Surface and Interface Analysis (ECASIA'97). Göteborg (Sweden), June 16-20, 1997 (poster).
5. *Procedimiento simplificado de preparación de secciones transversales de materiales frágiles no homogéneos. (Simplified procedure for TEM cross-section preparation of fragile non-homogeneous materials).*  
F. García, V. Gómez, N. Hermida, **R.J. Martín Palma**, C. Quirós and P. Herrero.  
XVIII Reunión Bienal de la Sociedad Española de Microscopía Electrónica. Toledo (Spain), April 15-18, 1997 (poster).

4. *Protective optical coatings.*  
J.M. Martínez-Duart, L. Vázquez, O. Sánchez, R.M. Bueno, A. Gutiérrez-Llorente, **R.J. Martín-Palma** and G. García-Ayuso.  
10th International Conference on Vacuum Web Coating. Fort Lauderdale (USA), November 10-12, 1996 (Invited Conference).
3. *Selection rules in the Raman spectrum of porous silicon.*  
F. Agulló-Rueda, J.D. Moreno, E. Montoya, R. Guerrero-Lemus, **R.J. Martín-Palma**, J.M. Martínez-Duart.  
Materials Research Society 1996 Fall Meeting. Boston (USA), December 2-6, 1996 (poster).
2. *Deposition of polypyrrole into porous silicon.*  
J.D. Moreno, F. Agulló-Rueda, R. Guerrero-Lemus, **R.J. Martín-Palma**, J.M. Martínez-Duart, M.L. Marcos and J. González-Velasco.  
Materials Research Society 1996 Fall Meeting. Boston (USA), December 2-6, 1996 (poster).
1. *La optoelectrónica de silicio poroso a partir de contactos poliméricos. (Optoelectronics of porous silicon from polymeric contacts).*  
J.D. Moreno, F. Agulló-Rueda, R. Guerrero-Lemus, **R.J. Martín-Palma**, J.M. Martínez-Duart, M.L. Marcos y J. González-Velasco.  
V Reunión Nacional de Materiales. Cádiz (Spain), October 1996 (poster).