

Lista Pubblicazioni

di Ivan Marri

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- 25) S. Ossicini, M. Govoni, R. Guerra and I. Marri, *Silicon Nanocrystals for Photonics and Photovoltaics: Ab-initio Results*, pubblicato in *Silicon Nanophotonics: Basic Principles, Present Status, and Perspectives* (2nd edition), Pan Stanford Publishing Pte Ltd , in Press.
- 24) I. Marri, M. Govoni and S. Ossicini, *First-Principles Calculations of Electronic Coupling Effects in Silicon Nanocrystals; Influence on Near Band-Edge States and on Carrier Multiplication Processes*, *Solar Energy Materials and Solar Cells*, **145**, 162 (2016).
- 23) I. Marri, M. Govoni and S. Ossicini, *Carrier Multiplication in Isolated and Interacting Silicon Nanocrystals*, pubblicato in "Nanotechnology and Photovoltaic Devices: Light Energy Harvesting with Group IV Nanostructures" edit by J. Valenta and S. Mirabella, Pan Stanford, (2015), ISBN 9789814463638.
- 22) I. Marri, M. Govoni and S. Ossicini, *Carrier Multiplication in Silicon Nanocrystals: Ab-initio Results*, *Beilstein J. Nanotechnol.* **6**, 343 (2015).
- 21) I. Marri, M. Govoni and S. Ossicini, *Red-Shifted Carrier Multiplication Energy Threshold and Exciton Recycling Mechanisms in Strongly Interacting Silicon Nanocrystals*, *J. Am. Chem. Soc.* **136**, 13257 (2014).
- 20) M. Govoni, I. Marri and S. Ossicini, *Carrier Multiplication Between Interacting Nanocrystals for Fostering Silicon-Based Photovoltaics*, *Nature Photon.* **6**, 672 (2012).

- 19) M. Govoni, I. Marri and S. Ossicini, *Auger Recombination in Si and GaAs Semiconductors: Ab-initio Results*, Phys. Rev. B **84**, 075215 (2011).
- 18) E. Degoli, R. Guerra, F. Iori, R. Magri, I. Marri, O. Bisi and S. Ossicini, *Ab-initio Calculations of Luminescence and Optical Gain Properties in Silicon Nanostructures*, CR. Phys. **10**, 575 (2009).
- 17) R. Guerra, I. Marri, R. Magri, L. Martin-Samos, O. Pulci, E. Degoli and S. Ossicini, *Optical Properties of Silicon Nanocrystallites in SiO₂ Matrix: Crystalline vs. Amorphous Case*, Superlattice and Microstructures, **46**, 246 (2009).
- 16) R. Guerra, I. Marri, R. Magri, L. Martin-Samos, O. Pulci, E. Degoli and S. Ossicini, *Silicon Nanocrystallites in a SiO₂ Matrix: Role of Disorder and Size*, Phys. Rev. B **79**, 155320 (2009).
- 15) A. Iacomino, G. Cantele, F. Trani, D. Ninno, I. Marri and S. Ossicini (2009), *The Role of the Surface Coverage on the Structural and the Electronic Properties of TiO₂ Nanocrystals*, MRS Proceedings, 1178, 1178-AA09-34 (2009).
- 14) A. Iacomino, G. Cantele, D. Ninno, I. Marri and S. Ossicini, *Structural, Electronic, and Surface Properties of Anatase TiO₂ Nanocrystals From First Principles*, Phys. Rev. B **78**, 075405 (2008).
- 13) I. Marri and S. Ossicini, *Oxygen Vacancy effects on the Schottky Barrier Height at the Au/TiO₂(110) Interface: A First Principle Study*, Solid State Communication, **147**, 205 (2008).
- 12) E. Degoli, R. Guerra, F. Iori, I. Marri and S. Ossicini, *Theoretical Studies of Absorption, Emission and Gain in Silicon Nanostructures*, Pubblicato in "Silicon Nanophotonics. Basic Principles, Present Status and Perspectives" edit by L. Khriachtchev, World Scientific Publishing Company (2008).

- 11) S. Ossicini, O. Bisi, E. Degoli, I. Marri, F. Iori, E. Luppi, R. Magri, R. Poli, G. Cantele, D. Ninno, F. Trani, M. Marsili, O. Pulci, M. Gatti, K. Gaal-Nagy, A. Incze, G. Onida and V. Olevano, *First-Principles Study of Silicon Nanocrystals: Structural and Electronic Properties, Absorption, Emission, and Doping*, J. Nanosci. Nanotechnol. **8**, 479 (2008).
- 10) F. Iori, E. Degoli, R. Magri, I. Marri, C. Cantele, D. Ninno, F. Trani and S. Ossicini, *Engineering Silicon Nanocrystals: Theoretical Study of the Effect of Codoping with Boron and Phosphorus*, Phys. Rev. B. **76**, 085302, (2007).
- 9) F. Iori, E. Degoli, E. Luppi, R. Magri, I. Marri, C. Cantele, D. Ninno, F. Trani and S. Ossicini, *Doping in silicon nanocrystals: An Ab-initio Study of the Structural, Electronic and Optical Properties* J. Lumin. **121**, 335 (2006).
- 8) I. Marri, C.M. Bertoni, P. Ferriani and Y. Joly, *Angular and Polarization Dependence of X-ray Resonant Elastic Scattering in Transition Metals*, Phys. Rev. B **74**, 212410 (2006).
- 7) I. Marri, P. Carra and C.M. Bertoni, *Optical Dichroism: E1-M1 Integral Relations*, J. Phys. A: Math. Gen. **39**, 1969 (2006).
- 6) J. Goulon, A. Rogalev, F. Wilhelm, N. Jaouen, C. Goulon-Ginet, P. Carra, I. Marri, C. Brouder, *Magneto-Electric Interactions Probed by X-ray Optical Activity*, Physica Scripta **T115**, 54 (2005).
- 5) I. Marri and P. Carra, *Scattering Operators for E1-E2 X-ray Resonant Diffraction*, Phys. Rev. B **69**, 113101 (2004).
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- 2) P. Carra, A. Jerez, I. Marri, *X-ray Dichroism in Noncentrosymmetric Crystals*, Phys. Rev. B. **67**, 045111 (2003).
- 1) E.Lidstrom, D. Mannix, A. Hiess, J. Rebizant, F. Wastin, G.H. Lander, I. Marri, P. Carra, C. Vettier and M.J. Longfield, *Resonant X-ray Magnetic Scattering from $U_{1-x}Np_xRu_2Si_2$ Alloys*, Phys. Rev. B **61**, 1375 (2000).