

Elenco delle Pubblicazioni

Pubblicazioni su rivista:

1. *First-principles optical properties of Si/CaF₂ multi-quantum wells*
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2. *Optical properties of Si/CaF₂ superlattices*
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3. *Symmetry and passivation dependence of the optical properties of nanocrystalline silicon structures*
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4. *From undulating Si quantum wires to Si quantum dots : a model for porous silicon*
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5. *The electronic and optical properties of Si/SiO₂ superlattices: role of confined and defect states*
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6. *Role of defects in Si/SiO₂ quantum wells*
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7. *Structural and optical properties of PECVD grown silicon nanocrystals*,
G. V. Prakash, N. Daldosso, Elena Degoli, F. Iacona, M. Cazzanelli, F. Rocca, G. Pucker, Z. Gaburro, P. Dalba, E. Ceretta Moreira, D. Pacifici, G. Franzò, F. Priolo, C. Arcangeli, A. B. Filonov, Stefano Ossicini and L. Pavesi, *J. of Nanoscience and Nanotechnology* 1, 159-168 (2001);
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9. *Ab-initio structural and electronic properties of hydrogenated silicon nanoclusters in their ground and excited state*,
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10. *The electronic and optical properties of silicon Nanoclusters: absorption and emission*, Eleonora Luppi, Elena Degoli, G. Cantele, Stefano Ossicini, Rita Magri, D. Ninno, O. Bisi, O. Pulci, G. Onida, M. Gatti, A. Incze, R. Del Sole, *Optical Materials*, **27**, 1008 (2005).
11. *Formation energies of silicon nanocrystals: role of dimension and passivation*,
Elena Degoli, Stefano Ossicini, G. Cantele, Eleonora Luppi, Rita Magri, D. Ninno, O. Bisi, *physica status solidi (c)*, **2** No. 9, 3354 (2005).

12. *Electronic, structural and optical properties of hydrogenated silicon nanocrystals: the role of the excited states*,
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13. *A first-principles study of n- and p-doped silicon nanoclusters*,
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15. *Thomas-Fermi model of electronic screening in semiconductor nanocrystals*,
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16. *Screening in semiconductor nanocrystals: Ab initio results and Thomas-Fermi theory*,
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17. *Doping in silicon nanocrystals: An ab initio study of the structural, electronic and optical properties*, F. Iori, Elena Degoli, E. Luppi, R. Magri, I. Marri, G. Cantele, D. Ninno, F. Trani, S. Ossicini, *Journal of Luminescence* **121**, 335-339 (2006).
18. *Understanding Doping in Silicon Nanostructures*, S. Ossicini, F. Iori, Elena Degoli, E. Luppi, R. Magri, R. Poli, G. Cantele, F. Trani, D. Ninno, *IEEE Journal of Selected Topics in Quantum Electronics* **12**, 1585 (2006).
19. *Ab-initio Electronic and Optical Properties of Low Dimensional Systems: from Single Particle to Many Body Approaches*, M. Palummo, M. Bruno, O. Pulci, E. Luppi, Elena Degoli, S. Ossicini, R. Del Sole, *Surf. Sci.* **601**, 2696 (2007).
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22. *Doping in silicon nanostructures*, F. Iori, S. Ossicini, Elena Degoli, E. Luppi, R. Poli, R. Magri, G. Cantele, F. Trani, D. Ninno, *Physica Status Solidi A* **204**, 1312 (2007).
23. *Engineering Silicon Nanocrystals: Theoretical Study of the Effect of Codoping with Boron and Phosphorous*, F. Iori, Elena Degoli, R. Magri, I. Marri, G. Cantele, D. Ninno, F. Trani, O. Pulci, S.Ossicini, *Phys. Rev. B* **76**, 085302 (2007).

24. *Structural Features and Electronic Properties of Group-III, Group-IV and Group-V-doped Si Nanocrystallites*, L. E. Ramos, Elena Degoli, G. Cantele, Stefano Ossicini, D. Ninno, J. Furthmüller, F. Bechstedt, *Journal of Physics: Condensed Matter* **19**, 466211 (2007).
25. *Role of surface passivation and doping in silicon nanocrystals*, R. Magri, Elena Degoli, F. Iori, E. Luppi, O. Pulci, S. Ossicini, G. Cantele, F. Trani, D. Ninno, *Journal of Computational Methods in Sciences and Engineering* **7**, 219–232 (2007).
26. *First Principle Study of Silicon Nanocrystals: Structural and Electronic Properties, Absorption, Emission and Doping*, S. Ossicini, O. Bisi, Elena 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, V. Olevano, *J. of Nanoscience and Nanotechnology* **8**, 479–492 (2008).
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30. *Ab-initio calculations of luminescence and optical gain properties in silicon nanostructures*, Elena Degoli, R. Guerra, F. Iori, R. Magri, I. Marri, O. Pulci, O. Bisi, S. Ossicini, *C. R. Physique* **10**, 575-586 (2009).
31. *Optical properties of silicon nanocrystallites in SiO₂ matrix: Crystalline vs. amorphous case*, R. Guerra, I. Marri, R. Magri, L. Martin-Samos, O. Pulci, Elena Degoli, S. Ossicini *Superlattices and Microstructures* **46**, 246-252 (2009).
32. *Silicon nanocrystallites in a SiO₂ matrix: Role of disorder and size*, R. Guerra, I. Marri, R. Magri, L. Martin-Samos, O. Pulci, Elena Degoli, S. Ossicini *Phys. Rev. B* **79**, 155320 (2009).
33. *Size, oxidation, and strain in small Si/SiO₂ nanocrystals*, R. Guerra, Elena Degoli, S. Ossicini, *Phys. Rev. B* **80**, 155332 (2009).
34. *Electronic and optical properties of Si and Ge nanocrystals: an ab-initio study*, Olivia Pulci, Elena Degoli, Federico Iori, Margherita Marsili, Maurizia Palummo, Rodolfo Del Sole and Stefano Ossicini, *Superlattices and Microstructures* **47**, 178 (2010).
35. *Local-fields and disorder effects in free-standing and embedded Si nanocrystallites*, R. Guerra, Elena Degoli, M. Marsili, O. Pulci and S. Ossicini, *phys. stat. sol. b* **247**, 2113 (2010).

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36. *Electron states in confined silicon systems*
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37. *First principles calculations of the electronic and optical properties of 2-, 1- and 0-dimensional confined Si structures*
S. Ossicini, Elena Degoli, D. Barbato, M. Luppi, E. Pettenati in *Physics Chemistry and Application of Nanostructures, Reviews and Short Notes to Nanomeeting '99, Minsk, Belarus 17-21 Maggio 1999*, edited by V. E. Borisenko, A. B. Filinov, S. V. Gaponenko V. S. Gurin (World Scientific Publishing, Singapore 1999), pp. 3-13;
38. *First Principle Calculations of the Optical Properties of Si Quantum Wells*
S. Ossicini and Elena Degoli in *Proceedings of the First International Symposium on Advanced Luminescent Materials and Quantum Confinement*, 196th Meeting of The Electrochemical Society, Honolulu, Hawaii, November 1999, PV 99-22, p. 62. Editors: M. Cahay, S. Bandyopadhyay, D. J. Lockwood, J.P. Leburton, N. Koshida, M. Meyyappan, and T. Sakamoto;
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40. *Si Nanostructures Embedded in SiO₂: Electronic and Optical properties*
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43. *Gain theory and models in silicon nanostructures*
S. Ossicini, C. Arcangeli, O. Bisi, Elena Degoli, M. Luppi, R. Magri, L. Dal Negro, L. Pavesi, in "Towards the first silicon laser" ed. by L. Dal Negro, S. Gaponenko and L. Pavesi, Nato Science Series vol. 93 (Kluwer Academic Publishers Dordrecht, 2003) pp. 271-290.
44. *Isolated and embedded silicon nanodots: the role of surface oxygen*

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45. *Electronic and Optical Properties of Silicon Nanocrystals: Structural Effects*
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48. *Formation energies of silicon nanocrystals: role of dimension and passivation*,
Stefano Ossicini, Elena Degoli, G. Cantele, Eleonora Luppi, Rita Magri, D. Ninno, O. Bisi, in “Porous Semiconductor Science and Technology – Materials of the 4th International Conference 2004”, ed. by L. T. Canham, A. Nassiopoulou, V. Parkhutik; P1-26, (2004)
49. *Structural, electronic, and optical properties of silicon nanoclusters: the role of the size and the surface passivation*,
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50. *Ab-initio Calculations Of The Electronic Properties of Hydrogenated and Oxidized Silicon Nanocrystals: ground and excited states*, S. Ossicini, O. Bisi, G. Cantele, Elena Degoli, R. Del Sole, M. Gatti, A. Incze, F. Iori, E. Luppi, R. Magri, D. Ninno, G. Onida, O. Pulci, Atti del XVII Congresso dell’Associazione Italiana del Vuoto, ed. by G. Bonizzoni, A. Riggio, 277 (2004).
51. *Ab-initio Calculations Of The Electronic Properties of Silicon Nanocrystals: Absorption, Emission, Stokes Shift*,
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Capitoli di libri

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