

PUBBLICAZIONI

- 1) **Complex-Morphology Metal-based Nanostructures: Fabrication, Characterization, and Applications**
A. Gentile, F. Ruffino, M. G. Grimaldi
Nanomaterials (MDPI AG, BASEL, SWITZERLAND), vol. 6, p. 110 (2016). DOI: 10.3390/nano6060110. [Review paper](#).
- 2) **Metal nanostructures with complex surface morphology: the case of supported lumpy Pd and Pt nanoparticles produced by laser processing of metal films**
F. Ruffino, P. Maugeri, G. Cacciato, M. Zimbone, M. G. Grimaldi
Physica E: Low-dimensional Systems and Nanostructures (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), in press 2016. DOI: 10.1016/j.physe.2016.05.013.
- 3) **Solid-state synthesized nanostructured Au dendritic aggregates towards surface-enhanced Raman spectroscopy**
A. Gentile, F. Ruffino, C. D'Andrea, P. Gucciardi, R. Reitano, M. G. Grimaldi
Journal of Electronic Materials (SPRINGER, NEW YORK), vol. 45, p. 2815 (2016). DOI: 10.1007/s11664-016-4369-9
- 4) **Immobilization of nanomaterials in PMMA composites for photocatalytic removal of dyes, phenols and bacteria from water**
M. Cantarella, R. Sanz, M. A. Bucceri, F. Ruffino, G. Rappazzo, S. Scalese, G. Impellizzeri, L. Romano, V. Privitera
Journal of Photochemistry and Photobiology A: Chemistry (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON) vol. 321, p. 1 (2016). DOI: 10.1016/j.jphotochem.2016.01.020
- 5) **Nanoscale electrical characteristics of metal (Au, Pd)-graphene-metal (Cu) contacts**
F. Ruffino, G. Meli, M. G. Grimaldi
Solid State Communications (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 225, p. 1 (2016). DOI: 10.1016/j.ssc.2015.10.010
- 6) **Au thin films nano-structuration on polycrystalline anatase and rutile TiO₂ substrates towards photocatalytic applications**
G. Cacciato, F. Ruffino, M. Zimbone, R. Reitano, V. Privitera, M. G. Grimaldi
Materials Science in Semiconductor Processing (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 42, p. 40 (2016). DOI: 10.1016/j.mssp.2015.07.074
- 7) **Emerging interface dipole versus screening effect in copolymer/metal nano-layered systems**
V. Torrisi, F. Ruffino, A. Liscio, M. G. Grimaldi, G. Marletta
Applied Surface Science (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 359, p. 637 (2015). DOI: 10.1016/j.apsusc.2015.10.157
- 8) **Quantitative evaluation of surface topographical changes of Au thin films after DNA immobilization**
S. Spampinato, G. Cacciato, M. Zimbone, F. Ruffino, M. G. Grimaldi
Chemical Physics Letters (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 639, p. 120 (2015). DOI: 10.1016/j.cplett.2015.09.006
- 9) **Experimental study on the coalescence process of SiO₂ supported colloidal Au nanoparticles**

F. Ruffino, V. Torrisi, M. G. Grimaldi
Physica E: Low-dimensional Systems and Nanostructures (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 74, p. 388 (2015). DOI: 10.1016/j.physe.2015.07.031

10) **Metal-Polymer Nanocomposites: (Co-)Evaporation/(Co-)Sputtering Approaches and Electrical Properties**

V. Torrisi, F. Ruffino

Coatings (MDPI AG, BASEL, SWITZERLAND), vol. 5, p. 378 (2015). DOI: 10.3390/coatings5030378. [Review paper](#).

11) **Controlled dewetting as fabrication and patterning strategy for metal nanostructures**

F. Ruffino, M. G. Grimaldi

Physica Status Solidi A (WILEY-VCH VERLAG GMBH), vol. 212, p. 1662 (2015). DOI: 10.1002/pssa.201431755

[“Feature Article”](#) in topical section on Organized Nanostructures.

12) **Silica nanowire-Au nanoparticle pea-podded composites: synthesis and structural analyses**

A. Gentile, F. Ruffino, S. Boninelli, M. G. Grimaldi

Thin Solid Films ((ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 589, p. 755 (2015). DOI: 10.1016/j.tsf.2015.07.011

13) **Twinned Si nanowires by high temperature annealing of Au/Si system in vacuum**

F. Ruffino, V. Torrisi, M. G. Grimaldi

Superlattices and Microstructures (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 85, p. 592 (2015). DOI: 10.1016/j.spmi.2015.06.024

14) **Dewetting process of Au films on SiO₂ nanowires: activation energy evaluation**

F. Ruffino, M. G. Grimaldi

Physica E: Low-dimensional Systems and Nanostructures (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 69, p. 121 (2015). DOI: 10.1016/j.physe.2015.01.033

15) **Size-selected growth of ultrathin SiO₂ nanowires on surfaces and their decoration by Au nanoparticles**

F. Ruffino, M. Censabella, V. Torrisi, M. G. Grimaldi

Materials Research Express (IOP PUBLISHING LTD, BRISTOL BS1 6BE, ENGLAND), vol. 2, p. 025003 (2015). DOI: 10.1088/2053-1591/2/2/025003

16) **Growth dynamics of quasi-one-dimensional confined Au nanoparticles on SiO₂ surface**

G. Cacciato, M. Zimbone, F. Ruffino, A. Scinto, G. D'Arrigo, M. G. Grimaldi

Materials Letters (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 141, p. 347 (2015). DOI: 10.1016/j.matlet.2014.11.096

17) **Electrical properties modulation of thin film solar cell using gold nanostructures at textured FTO/p-i-n interface**

A. Gentile, G. Cacciato, F. Ruffino, R. Reitano, G. G. Scapellato, M. Zimbone, S. Lombardo, A. Battaglia, C. Gerardi, M. Foti, M. G. Grimaldi

Functional Materials Letters (WORLD SCIENTIFIC PUBLISHING, Singapore), vol. 8, p. 1550017 (2015). DOI: 10.1142/S1793604715500174

18) Nano-scale structuration and optical properties of thin gold films on textured FTO

A. Gentile, G. Cacciato, F. Ruffino, R. Reitano, G. G. Scapellato, M. Zimbone, S. Lombardo, A. Battaglia, C. Gerardi, M. Foti, M. G. Grimaldi

Journal of Materials Science (SPRINGER, NEW YORK), vol. 49, p. 8498 (2014). DOI: 10.1007/s10853-014-8560-1

19) Self-organized patterned arrays of Au and Ag nanoparticles by thickness-dependent dewetting of template-confined films

F. Ruffino, M. G. Grimaldi

Journal of Materials Science (SPRINGER, NEW YORK), vol. 49, p. 5714 (2014). DOI: 10.1007/s10853-014-8290-4

20) Schottky barrier height tuning by Hybrid organic-inorganic multilayers

V. Torrisi, M. A. Squillaci, F. Ruffino, I. Crupi, M. G. Grimaldi, G. Marletta

Materials Research Society Symposia Proceedings (MATERIALS RESEARCH SOCIETY, 506 KEYSTONE DRIVE, WARRENTALE, PA 15088-7563 USA), vol. 1660, p. 396 (2014). DOI: 10.1557/opl.2014.396

21) Simulations of the light scattering properties of metal/oxide core/shell nano-spheres

F. Ruffino, G. Piccitto, M. G. Grimaldi

Journal of Nanoscience (HINDAWI PUBLISHING CORPORATION, NEW YORK), vol. 2014, p. 407670 (2014). DOI: 10.1155/2014/407670

22) Surface diffusion coefficient of Au atoms on single layer graphene grown on Cu

F. Ruffino, G. Cacciato, M. G. Grimaldi

Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 115, p. 084304 (2014). DOI: 10.1063/1.4866876

23) Structural and optical properties of solid-state synthesized Au dendritic structures

A. Gentile, F. Ruffino, L. Romano, S. Boninelli, R. Reitano, G. Piccitto, M. G. Grimaldi

Applied Surface Science (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 296, p. 177 (2014). DOI: 10.1016/j.apusc.2014.01.068

24) Micro-patterned nanoscale Au films on PMMA: fabrication and effect of PMMA dewetting on Au patterning

F. Ruffino, V. Torrisi, G. Marletta, M. G. Grimaldi

Journal of Materials Science: Materials in Electronics (SPRINGER, NEW YORK), vol. 25, p. 1138 (2014). DOI: 10.1007/s10854-013-1701-5

25) Dewetting of template-confined Au films on SiC surface: from patterned films to patterned arrays of nanoparticles

F. Ruffino, M. G. Grimaldi

Vacuum (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 99, p. 28 (2014). DOI: 10.1016/j.vacuum.2013.04.021

26) Polymer/metal hybrid multilayers modified Schottky devices

V. Torrisi, F. Ruffino, G. Isgò, I. Crupi, G. Li Destri, M. G. Grimaldi, G. Marletta

Applied Physics Letters (AMER INST PHYSICS, MELVILLE), vol. 103, p. 193117 (2013). DOI: 10.1063/1.4829532

27) Au nanoparticles decorated SiO₂ nanowires by dewetting on curved surfaces: facile synthesis and nanoparticles-nanowires sizes correlation

F. Ruffino, M. G. Grimaldi

Journal of Nanoparticle Research (SPRINGER, NEW YORK), vol. 15, p. 1909 (2013). DOI: 10.1007/s11051-013-1909-6

28) **Molybdenum sputtering film characterization for high gradient accelerating structures**

S. Bini, B. Spataro, A. Marcelli, S. Sarti, V. A. Dolgashev, S. Tantawi, A. D. Yeremian, Y. Higashi, M. G. Grimaldi, L. Romano, F. Ruffino, R. Parodi, G. Cibin, C. Marrelli, M. Migliorati, C. Caliendo

Chinese Physics C (IOP PUBLISHING LTD, BRISTOL BS1 6BE, ENGLAND), vol. 37, p. 097005 (2013). DOI: 10.1088/1674-1137/37/9/097005

29) **Formation of patterned arrays of Au nanoparticles on SiC surface by template-confined dewetting of normal and oblique deposited nanoscale films**

F. Ruffino, M. G. Grimaldi

Thin Solid Films (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 536, p. 99 (2013). DOI: 10.1016/j.tsf.2013.03.123

30) **Rayleigh-instability-driven dewetting of thin Au and Ag films on ITO surface under nanosecond laser irradiations**

F. Ruffino, E. Carria, S. Kimiagar, I. Crupi, M. G. Grimaldi

Micro & Nano Letters (INST ENGINEERING TECHNOLOGY-IET, MICHAEL FARADAY HOUSE SIX HILLS WAY STEVENAGE, HERTFORD SG1 2AY, ENGLAND), vol. 8, p. 127 (2013). DOI: 10.1049/mnl.2012.0870

31) **Structural and morphological characterization of molybdenum coatings for high gradient accelerating structures**

Xu Yong, B. Spataro, S. Sarti, V.A. Dolgashev, S. Tantawi, A.D. Yeremian, Y. Higashi, M.G. Grimaldi, L. Romano, F. Ruffino, R. Parodi, C. Caliendo, A. Notargiacomo, G. Cibin, A. Marcelli

Journal of Physics: Conference series (IOP PUBLISHING LTD, BRISTOL BS1 6BE, ENGLAND), vol. 430, p. 012091(2013). DOI: 10.1088/1742-6596/430/1/012091

32) **Nanostructuring thin Au films on transparent conductive oxide substrates**

F. Ruffino, I. Crupi, E. Carria, S. Kimiagar, F. Simone, M. G. Grimaldi

Materials Science and Engineering B (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 178, p. 533 (2013). DOI: 10.1016/j.mseb.2012.10.012

33) **Template-confined dewetting of Au and Ag nanoscale films on mica substrate**

F. Ruffino, M. G. Grimaldi

Applied Surface Science (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 270, p. 697 (2013). DOI: 10.1016/j.apsusc.2013.01.130

34) **Structural and optical properties of highly Er-doped Yb-Y disilicate thin films**

P. Cardile, M. Miritello, F. Ruffino, F. Priolo

Optical Materials Express (OPTICAL SOCIETY OF AMERICA), vol. 3, p. 11 (2013). DOI: 10.1364/OME.3.000011

35) **Light scattering calculations from Au and Au/SiO₂ core/shell nanoparticles**

F. Ruffino, A. Pugliara, E. Carria, C. Bongiorno, M. G. Grimaldi

Physica E: Low-dimensional Systems and Nanostructures (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 47, p. 25 (2013). DOI:

36) Patterning of templated-confined nanoscale Au films by thermal-induced dewetting process of a PMMA underlaying layer

F. Ruffino, V. Torrisi, G. Marletta, M. G. Grimaldi

Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 112, p. 124316 (2012). DOI: 10.1063/1.4771686

37) Generation and self-organization of bimetallic PdAu nanoparticles on SiO₂ by sequential sputtering depositions and annealing processes

F. Ruffino, E. F. Pecora, M. G. Grimaldi

Journal of Nanoscience and Nanotechnology (AMER SCIENTIFIC PUBLISHERS, USA), vol. 12, p. 8537 (2012). DOI: 10.1166/jnn.2012.6826

38) Nanoporous Ge electrode as template for nano-sized (<5 nm) Au aggregates

G. Impellizzeri, L. Romano, B. Fraboni, E. Scavetta, F. Ruffino, C. Bongiorno, V. Privitera, M. G. Grimaldi

Nanotechnology (IOP PUBLISHING LTD, BRISTOL BS1 6BE, ENGLAND), vol. 23, p. 395604 (2012). DOI: 10.1088/0957-4484/23/39/395604

39) Towards a laser fluence dependent nanostructuring of thin Au films on Si by nanosecond laser irradiation

F. Ruffino, A. Pugliara, E. Carria, L. Romano, C. Bongiorno, G. Fisicaro, A. La Magna, C. Spinella, M. G. Grimaldi

Applied Surface Science (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 258, p. 9128 (2012). DOI: 10.1016/j.apsusc.2011.12.087

40) Formation and evolution of nanoscale metal structures on ITO surface by nanosecond laser irradiations of thin Au and Ag films

F. Ruffino, E. Carria, S. Kimiagar, I. Crupi, F. Simone, M. G. Grimaldi

Science of Advanced Materials (AMER SCIENTIFIC PUBLISHERS, USA), vol. 4, p. 708 (2012). DOI: 10.1166/sam.2012.1342

41) Formation of nanoparticles from laser irradiated thin Au film on SiO₂/Si: elucidating the Rayleigh-instability role

F. Ruffino, A. Pugliara, E. Carria, C. Bongiorno, C. Spinella, M. G. Grimaldi

Materials Letters ((ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 84, p. 27 (2012). DOI: 10.1016/j.matlet.2012.06.055

42) Development of X-band accelerating structures for high gradients

S. Bini, V. Chimenti, A. Marcelli, L. Palumbo, B. Spataro, V. A. Dolgashev, S. Tantawi, Y. Higashi, M. G. Grimaldi, L. Romano, F. Ruffino, R. Parodi, A. D. Yeremian

Chinese Physics C (IOP PUBLISHING LTD, BRISTOL BS1 6BE, ENGLAND), vol. 36, p. 639 (2012). DOI: 10.1088/1674-1137/36/7/013

43) Nanoporosity induced by ion implantation in deposited amorphous Ge thin films

L. Romano, G. Impellizzeri, L. Bosco, F. Ruffino, M. Miritello, M. G. Grimaldi

Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 111, p. 113515 (2012). DOI: 10.1063/1.4725427

44) Control of the kinetic roughening in nanostructured Ag films by oblique sputter-depositions

F. Ruffino, M. G. Grimaldi

Nanoscience and Nanotechnology Letters (AMER SCIENTIFIC PUBLISHERS, USA), vol. 4, p. 309 (2012). DOI: 10.1166/nnl.2012.1310

- 45) Effects of the embedding kinetics on the surface nano-morphology of nano-grained Au and Ag films on PS and PMMA layers annealed above the glass transition temperature
F. Ruffino, V. Torrisi, G. Marletta, M. G. Grimaldi
Applied Physics A (SPRINGER, NEW YORK), vol. 107, p. 669 (2012). DOI: 10.1007/s00339-012-6442-5
- 46) Influence of the electro-optical properties of an α -Si:H single layer on the performances of a pin solar cell
I. Crupi, F. S. Ruggeri, A. Grasso, F. Ruffino, G. Catania, A. M. Piro, S. Di Marco, S. Mirabella, F. Simone, F. Priolo
Thin Solid Films (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 520, p. 4036 (2012). DOI: 10.1016/j.tsf.2012.01.044
- 47) A combined ion implantation/nanosecond laser irradiation approach towards Si nanostructures doping
F. Ruffino, L. Romano, E. Carria, M. Miritello, M. G. Grimaldi, V. Privitera, F. Marabelli
Journal of Nanotechnology (HINDAWI PUBLISHING CORPORATION, NEW YORK), vol. 2012, p. 635705. DOI: 10.1155/2012/635705
- 48) High temperature annealing of thin Au films on Si: growth of SiO_2 nanowires or Au dendritic nanostructures?
F. Ruffino, L. Romano, G. Pitruzzello, M. G. Grimaldi
Applied Physics Letters (AMER INST PHYSICS, MELVILLE), vol. 100, p. 053102 (2012). DOI: 10.1063/1.3679614 (citato anche in “Virtual Journal of Nanoscale Science and Technology”, 13 Febbraio 2012).
- 49) Novel approach to the fabrication of Au/Silica core-shell nanostructures based on nanosecond laser irradiations of thin Au film on Si
F. Ruffino, A. Pugliara, E. Carria, L. Romano, C. Bongiorno, C. Spinella, M. G. Grimaldi
Nanotechnology (IOP PUBLISHING LTD, BRISTOL BS1 6BE, ENGLAND), vol. 23, p. 045601 (2012). DOI: 10.1088/0957-4484/23/4/045601 (Selezionato dall'editore come “featured article” per il numero 4 del volume 23 di Nanotechnology)
- 50) Detailed investigation of the influence of the process parameters on the nano-morphology of Ag deposited on SiC by radio-frequency sputtering
F. Ruffino, M. G. Grimaldi
Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 110, p. 044311 (2011). DOI: 10.1063/1.3626072
- 51) Growth morphology of nanoscale sputter-deposited Au films on amorphous soft polymeric substrates
F. Ruffino, V. Torrisi, G. Marletta, M. G. Grimaldi
Applied Physics A (SPRINGER, NEW YORK), vol. 103, p. 939 (2011). DOI: 10.1007/s00339-011-6413-1
- 52) Self-organization of bimetallic PdAu nanoparticles on SiO_2 surface
F. Ruffino, M. G. Grimaldi
Journal of Nanoparticle Research (SPRINGER, NEW YORK), vol. 13, p. 2329 (2011). DOI: 10.1007/s11051-010-9992-4
- 53) Analyses of the As doping of $\text{SiO}_2/\text{Si}/\text{SiO}_2$ nanostructures
F. Ruffino, M. V. Tomasello, M. Miritello, R. De Bastiani, G. Nicotra, C. Spinella, M. G. Grimaldi
Physica Status Solidi C (WILEY-VCH VERLAG GMBH), vol. 8, p. 863 (2011).

54) **Memory effects in annealed hybrid gold nanoparticles/block copolymer bilayers**

V. Torrisi, **F. Ruffino**, A. Licciardello, M. G. Grimaldi, G. Marletta

Nanoscale Research Letters (SPRINGER, NEW YORK), vol. 6, p. 167 (2011).

DOI: 10.1186/1556-276X-6-167

55) **Atomic force microscopy investigation of the kinetic growth mechanisms of sputtered nanostructured Au film on mica: towards a nanoscale morphology control**

F. Ruffino, V. Torrisi, G. Marletta, M. G. Grimaldi

Nanoscale Research Letters (SPRINGER, NEW YORK), vol. 6, p. 112 (2011).

DOI: 10.1186/1556-276X-6-112

56) **Formation and evolution of self-organized Au nanorings on Indium-TiN-Oxide surface**

F. Ruffino, I. Crupi, F. Simone, M. G. Grimaldi

Applied Physics Letters (AMER INST PHYSICS, MELVILLE), vol. 98, p. 023101 (2011). DOI: 10.1063/1.3536526 (citato anche in “Virtual Journal of Nanoscale Science and Technology”, 24 Gennaio 2011).

57) **Room-temperature electrical characteristics of Pd/SiC diodes with embedded Au nanoparticles at the interface**

F. Ruffino, I. Crupi, A. Irrera, M. G. Grimaldi

AIP Conference Proceedings (AMER INST PHYSICS, MELVILLE), vol. 1292, p. 103 (2010). DOI: 10.1063/1.3518271

58) **Pd/Au/SiC nanostructured diodes for nanoelectronics: room-temperature electrical properties**

F. Ruffino, I. Crupi, A. Irrera, M. G. Grimaldi

IEEE Transactions on Nanotechnology (IEEE Nanotechnology Council, New York), vol. 9, p. 414 (2010). DOI: 10.1109/TNANO.2009.2033270

59) **Kinetic growth mechanisms of sputter-deposited Au films on mica: from nanoclusters to nanostructured microclusters**

F. Ruffino, V. Torrisi, G. Marletta, M. G. Grimaldi

Applied Physics A (SPRINGER, NEW YORK), vol. 100, p. 7 (2010). DOI: 10.1007/s00339-010-5797-7. **Articolo su invito.**

60) **Atomic force microscopy study of the growth mechanism of nanostructured sputtered Au film on Si(111): evolution with film thickness and annealing time**

F. Ruffino, M. G. Grimaldi

Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 107, p. 104321 (2010). DOI: 10.1063/1.3428467

61) **Island-to-percolation transition during the room-temperature growth of sputtered nanoscale Pd films on hexagonal SiC**

F. Ruffino, M. G. Grimaldi

Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 107, p. 074301 (2010). DOI: 10.1063/1.3361321

62) **As doping of Si-based low-dimensional systems**

F. Ruffino, M. V. Tomasello, M. Miritello, G. Nicotra, C. Spinella, M. G. Grimaldi

Applied Physics Letters (AMER INST PHYSICS, MELVILLE), vol. 96, p. 093116 (2010). DOI: 10.1063/1.3353987 (citato anche in “Virtual Journal of

Nanoscale Science and Technology”, 22 Marzo 2010).

63) Au/Si nanodroplets towards Si nanowires formation: characterization of the thermal-induced self-organization mechanism

F. Ruffino, A. Canino, M. G. Grimaldi, F. Giannazzo, F. Roccaforte, V. Raineri
IOP Conference Series: Materials Science and Engineering (IOP PUBLISHING LTD, BRISTOL BS1 6BE, ENGLAND), vol. 6, p. 012032 (2009). DOI: 10.1088/1757-899X/6/012032

64) Room-temperature grain growth in sputtered nanoscale Pd thin films: dynamic scaling behaviour on SiO₂

F. Ruffino, A. Irrera, R. De Bastiani, M. G. Grimaldi
Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 106, p. 084309 (2009). DOI: 10.1063/1.3246619 (citato anche in “Virtual Journal of Nanoscale Science and Technology”, 21 Ottobre 2009).

65) Tuning the electron transport mechanism in metal nanoparticles arrays by the manipulation of the electronic coupling and structural disorder

F. Ruffino, A. M. Piro, G. Piccitto, M. G. Grimaldi, C. Bongiorno, C. Spinella
Applied Physics A (SPRINGER, NEW YORK), vol. 97, p. 63 (2009). DOI: 10.1007/s00339-009-5347-3

66) Nanoscale current transport through Schottky contacts on wide bandgap semiconductors

F. Giannazzo, F. Roccaforte, F. Iucolano, V. Raineri, F. Ruffino, M. G. Grimaldi
Journal of Vacuum Science and Technology B (AMER INST PHYSICS, MELVILLE), vol. 27, p. 789 (2009). DOI: 10.1116/1.3043453 (citato anche in “Virtual Journal of Nanoscale Science and Technology”, 30 Marzo 2009).

67) Normal and abnormal grain growth in nanostructured gold films

F. Ruffino, C. Bongiorno, F. Giannazzo, F. Roccaforte, V. Raineri, C. Spinella, M. G. Grimaldi
Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 105, p. 054311 (2009). DOI: 10.1063/1.3093681

68) Kinetic mechanisms of the in-situ electron beam-induced self-organization of gold nanoclusters in SiO₂ film

F. Ruffino, C. Bongiorno, F. Giannazzo, F. Roccaforte, V. Raineri, C. Spinella, M. G. Grimaldi
Journal of Physics D: Applied Physics (IOP PUBLISHING LTD, BRISTOL BS1 6BE, ENGLAND), vol. 42, p. 075304 (2009). DOI: 10.1088/0022-3727/42/7/075304

69) Atomic Force Microscopy study of the kinetic roughening in nanostructured gold films on SiO₂

F. Ruffino, M. G. Grimaldi, F. Giannazzo, F. Roccaforte, V. Raineri
Nanoscale Research Letters (SPRINGER, NEW YORK), vol. 4, pp. 262-268 (2009). DOI: 10.1007/s11671-008-9235-0

70) Thermodynamic properties of supported and embedded metallic nanocrystals: Au on/in SiO₂

F. Ruffino, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi
Nanoscale Research Letters (SPRINGER, NEW YORK), vol. 3, pp. 454-460 (2008). DOI: 10.1007/s11671-008-9180-y

71) Electrical properties of self-assembled nano-Schottky diodes

F. Ruffino, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi

Journal of Nanomaterials (HINDAWI PUBLISHING CORPORATION, NEW YORK), vol. 2008, ID: 243792 (2008) DOI: 10.1155/2008/243792.

72) **Microstructure of Au nanocrystals formed in and on SiO₂**

F. Ruffino, C. Bongiorno, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi
Superlattices and Microstructures (ACADEMIC PRESS LTD ELSEVIER SCIENCE LTD, LONDON), vol. 44, pp. 588-598 (2008). DOI: 10.1016/j.spmi.2008.01.001.

73) **Kinetic mechanism of the thermal-induced self-organization of Au/Si nano-droplets on Si(100): size and roughness evolution**

F. Ruffino, A. Canino, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi
Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 104, p. 024310 (2008). DOI: 10.1063/1.2955784

74) **Clustering of gold on 6H-SiC and local nanoscale electrical properties**

F. Ruffino, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi
Solid State Phenomena (TRANS TECH PUBLICATIONS Ltd, ZURICH), vols. 131-133, pp. 517-522 (2008).

75) **Effect of surrounding environment on atomic structure and equilibrium shape of growing nanocrystals: gold in/on SiO₂**

F. Ruffino, C. Bongiorno, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi
Nanoscale Research Letters (SPRINGER, NEW YORK), vol. 2, pp. 240-247 (2007). DOI: 10.1007/s11671-007-9058-4

76) **Self-organization of Au nanoclusters on the SiO₂ surface induced by 200keV-Ar⁺ irradiation**

F. Ruffino, R. De Bastiani, C. Bongiorno, F. Giannazzo, F. Roccaforte, C. Spinella, V. Raineri, M. G. Grimaldi
Nuclear Instruments and Methods in Physics Research B (ELSEVIER SCIENCE BV, AMSTERDAM), vol. 257, pp. 810-814 (2007). DOI: 10.1016/j.nimb.2007.01.090

77) **Structural and electrical characterization of gold nanoclusters in SiO₂ films: realization of a nanoscale tunnel rectifier**

F. Ruffino, M. G. Grimaldi
Microelectronic Engineering (ELSEVIER SCIENCE BV, AMSTERDAM), vol. 84, pp. 532-537 (2007). DOI: 10.1016/j.mee.2006.10.090

78) **Self-organization of gold nanoclusters on hexagonal SiC and SiO₂ surfaces**

F. Ruffino, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi
Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 101, p. 064306 (2007). DOI: 10.1063/1.2711151

79) **Electronic collective transport in disordered array of C49-phase TiSi₂ nanocrystals in Si**

F. Ruffino, A. M. Piro, G. Piccitto, M. G. Grimaldi
Journal of Applied Physics (AMER INST PHYSICS, MELVILLE), vol. 101, p. 024316 (2007). DOI: 10.1063/1.2427108

80) **Nanoscale voltage tunable tunnel rectifier by gold nanostructures embedded in SiO₂**

F. Ruffino, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi
Applied Physics Letters (AMER INST PHYSICS, MELVILLE), vol. 89, p. 263108 (2006). DOI: 10.1063/1.2424433

81) Size-dependent Schottky barrier height in self-assembled gold nanoparticles

F. Ruffino, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi

Applied Physics Letters (AMER INST PHYSICS, MELVILLE), vol. 89, p. 243113-1 (2006). (citato anche in “Virtual Journal of Nanoscale Science and Technology”, 25 Dicembre 2006). DOI: 10.1063/1.2405407

CONTRIBUTI IN LIBRI SCIENTIFICI

1) Self-assembled metal nanostructures in semiconductor structures

F. Ruffino, F. Giannazzo, F. Roccaforte, V. Raineri, M. G. Grimaldi

Capitolo 3 del libro “Towards Functional Nanomaterials” nella serie “Lectures Notes in Nanoscale Science and Technology” (Vol. 5), Springer (New York), 2009. ISBN: 978-0-387-77716-0

2) TiO₂ nanostructures and nanocomposites for sustainable photocatalytic water purification

G. Cacciato, M. Zimbone, F. Ruffino, M. G. Grimaldi

Capitolo nel libro “Green Nanotechnology-Overview and Future Prospects”, InTech Open Access Publisher Croazia, 2016. ISBN: 978-953-51-4692-6. Chapter DOI: 10.5772/62620

3) One-dimensional gold-silica nanocomposites: fabrication, characterization and applications

F. Ruffino

Capitolo 5 del libro “Advanced Materials Interfaces”, nella serie “Advanced Materials Book Series”, Wiley-Scrivener Publishing USA, in press 2016. ISBN: 9781119242451

NOTE TECNICHE

1) Development of X-band accelerating structures for high gradients

S. Bini, V. Chimenti, A. Marcelli, L. Palumbo, B. Spataro, V. A. Dolgashev, S. Tantawi, A. D. Yeremian, Y. Higashi, M. G. Grimaldi, L. Romano, F. Ruffino, R. Parodi

SPARC-RF-11/04, May 30, 2011 (Nota Tecnica)

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