

Nanobiotechnology Facility Publications

Nanochemistry laboratory

no	authors	title	publication	year
1	Caputo G, Nobile C, Kipp T., Blasi L, Grillo V, Carlino E, Manna L, Cingolani R, Cozzoli P. D, Athanassiou A.	Reversible wettability changes in colloidal TiO ₂ nanorod thin film coatings under selective UV laser irradiation	Journal of Physical Chemistry C, 2008, 112(3), 701-714.	2008
2	Di Corato R, Quarta A, Piacenza P, Ragusa A, Figuerola A, Buonsanti R, Cingolani R, Manna L, Pellegrino T	Water solubilization of hydrophobic nanocrystals by means of poly(maleic anhydride-alt-1-octadecene)	Journal of Materials Chemistry 2008, 18, 1991–1996	2008
3	Fasoli A, Pisana S, Colli A., Carbone L, Manna L, Ferrari A.C	Vapor-phase nucleation of individual CdSe nanostructures from shape-engineered nanocrystal seeds	Applied Physics Letters, 2008, art. n. 023106	2008
4	Figuerola A, Fiore A, Di Corato R, Falqui A, Giannini C, Micotti, Lascialfari A, Corti M, Cingolani R, Pellegrino T, Cozzoli Pantaleo D, Manna L	One-Pot Synthesis and Characterization of Size-Controlled Bimagnetic FePt-iron Oxide heterodimer nanocrystals	<i>J. Am. Chem. Soc.</i> , 130, 1477-1487	2008
5	Halley D, Majjad H, Bowen M, Najjari N., Henry Y, Ulhaq-Bouillet C, Weber W, Bertoni G, Verbeeck J, Van Tendeloo G	Electrical switching in Fe/Cr/MgO/Fe magnetic tunnel junctions	<i>Appl. Phys. Lett.</i> 92, 212115	2008
6	Malvindi M. A, Carbone L, Quarta A, Tino A, Manna L, Pellegrino T, Tortiglione C	Rod Shaped Nanocrystals Elicit Neuronal Activity In Vivo	<i>Small</i> , 2008, 4(10), 1747–1755	2008
7	Morello G, Tarì D, Carbone L, Manna L, Cingolani R, De Giorgi M	Radiative recombination dynamics in tetrapod-shaped CdTe nanocrystals: Evidence for a photoinduced screening of the internal electric field'	Applied Physics Letters, 2008, 92, 191905.	2008

8	Quarta A, Di Corato R, Manna L, Argentiere S, Cingolani R, Barbarella G, Pellegrino T.	Multifunctional Nanostructures Based on Inorganic Nanoparticles and Oligothiophenes and their Exploitation for Cellular Studies'	Journal of the American Chemical Society, 2 130, 10545–10555.	2008
9	Rodríguez-Pérez L, Teuma E, Falqui A, Gómez M, Serp P	Supported Ionic Liquid Phase Catalysis on Functionalized Carbon Nanotubes	<i>Chemical Communications</i> , 35, 4201-4203	2008
10	Arnesano F, Scintilla S, Calò V, Bonfrate E, Ingrosso C, Losacco M, Pellegrino, Rizzarelli E, Natile G.	Copper-triggered aggregation of ubiquitin	PlosOne, volume 4, (issue 9) (1-11)	2009
11	Bacsa R. R, Dexpert-Ghys J, Verelst M, Falqui A, Machado B, Bacsa W. S, Chen P, Zakeeruddin S. M, Graetzel M, Serp P.	Synthesis and structure-property correlation in shape controlled ZnO nanoparticles prepared by Chemical Vapour Synthesis and their application in Dye Sensitized Solar Cells	<i>Advanced Functional Materials</i> , 19, 875–886	2009
12	Bigall N. C, Herrmann A-K, Vogel M, Rose M, Simon P, Carrillo-Cabrera W, Dorfs D, Kaskel S, Gaponik N, Eychmüller A.	Hydrogels and Aerogels from Noble Metal Nanoparticles	Published Online: Nov 13 2009, DOI: 10.1002/anie.200902543	2009
13	Casavola M, Falqui A, Garcia M. A, García-Hernández M, Giannini C, Cingolani R, Cozzoli P. D.	Exchange-Coupled Bimagnetic Cobalt/Iron Oxide Branched Nanocrystal Heterostructures	<i>Nano Letters</i> , 9 (1), 366-376	2009
14	Deka Sasanka, Falqui A, Bertoni G., Sangregorio C, Poneti G, Morello G, De Giorgi M, Giannini C, Cingolani R, Manna L, Cozzoli P.D	Fluorescent Asymmetrically Cobalt-Tipped CdSe@CdS Core@Shell Nanorod Heterostructures Exhibiting Room-Temperature Ferromagnetic Behavior	<i>Journal of the American Chemical Society</i> , 131 (35), pp 12817-12828	2009
15	Deka Sasanka, Quarta A, Lupo M. G, Falqui A, Boninelli S, Lanzani G., Morello G, De Giorgi M, Giannini C, Cingolani R, Pellegrino T, Manna L.	CdSe/CdS/ZnS Double Shell Nanorods with High Photoluminescence Efficiency and Their Exploitation As Biolabeling Probes	<i>Journal of the American Chemical Society</i> , 131 (8), p 2948-2958. <i>Journal of Catalysis</i> , (in press)	2009

16	Di Corato R., Piacenza P., Musarò M., Buonsanti R., Cozzoli P. D., Zambianchi M., Barbarella G., Cingolani R., Manna L, Pellegrino T	Magnetic-Fluorescent Colloidal Nano-Beads: Preparation and Exploitation in Cell Separation Experiments	Macromolecular Bioscience, 2009, 9, 952–958.	2009
17	Falcaro P, Malfatti L, Kidchob T, Giannini G, Falqui A, Casula M.F, Amenitsch H, Marmioli B, Greci G, Innocenzi P.	Hierarchical porous silica films with ultra-low refractive index	<i>Chemistry of Materials</i> , 21 (10), 2055–2061	2009
18	Figuerola A, Franchini I, R, Fiore A, Mastria R, Falqui A, Bertoni G, Bals S, Van Tendeloo G, Kudera S, Cingolani R, Manna L	End-to-End Assembly of Shape-Controlled Nanocrystals via a Nanowelding Approach Mediated by Gold Domains	<i>Advanced Materials</i> , vol. 21 (5), 550-554	2009
19	Fiore A, Mastria R, Lupo M. G, Lanzani G, Giannini C, Carlino E, Morello G, De Giorgi M, Lia Y, Cingolani R, Manna L.	Tetrapod-shaped colloidal nanocrystals of II-VI semiconductors prepared by seeded growth'	Journal of the American Chemical Society, 2009, 131 (6), 2274-2282.	2009
20	Franchini I.R, Bertoni G, Falqui A, Giannini C, Wang L. W, Manna L.	Colloidal PbTe-Au Nanocrystal Heterostructures	<i>Journal of Materials Chemistry (in press)</i>	2009
21	Lacroix L-M, Lachaize S, Falqui A, Respaud M, Chaudret B.	Iron Nanoparticles Growth in Organic Super-Structures	<i>Journal of American Chemical Society</i> , 2009, 131 (2), 549-557	2009
22	Maruccio G, Primiceri E, Marzo P, Arima V, Pellegrino T, Krahe R, Della Torre A, Cingolani R, Rinaldi R.	A nanoelectrode-based biosensor for the detection of single biorecognition events	Analyst (DOI:10.1039/B920559B),(in press)	2009
23	Maynadié J, Salant A, Falqui A, Respaud M, Shaviv E, Banin U, Soulantica K, Chaudret B.	Cobalt growth on the tips of CdSe nanorods	<i>Angewandte Chemie International Edition</i> , 48 (10), 1814-1817	2009
24	Mountjoy G, Falqui A, Corrias A, Gas M	A transmission electron microscopy study of Fe-Co alloy nanoparticles in a silica aerogel matrix using HREM, EDX, and EELS	<i>Microscopy and Microanalysis</i> , 15 (02), 114-124	2009

25	Nolle D, Goering E, Tietze T, Schütz G, Figuerola A, Manna L,	Structural and magnetic deconvolution of FePt/FeOx -nanoparticles using x-ray magnetic circular dichroism	New Journal of Physics, 11 , 033034.	2009
26	Philippe R, Caussat B, Falqui A, Kihn Y, Kalck P, Bordère S, Plee D, Gaillard P, Bernardg D, Serp P	An original growth mode of MWCNTs on alumina supported iron catalysts	<i>Journal of Catalysis</i> , Appeared on web, DOI: 10.1016/j.jcat.2009.02.027 (in press)	2009
27	Quarta A., Ragusa A., Deka S. Tortiglione C., Tino A., Cingolani R. , Pellegrino T	A Bio-conjugation of rod-shaped fluorescent nanocrystals for efficient targeted cell labelling	Langmuir, (ASAP,DOI: 10.1021/la901831y)	2009
28	Tortiglione C, Quarta A, Malvindi M. A, Tino A, Pellegrino T.	Fluorescent Nanocrystals Reveal Regulated Portals of Entry into and Between the Cells of Hydra	PlosOne, October 2009, (in press)	2009
29	Verbeeck J, Bertoni G.	Deconvolution of core electron energy loss spectra	Ultramicroscopy, vol. 109, p. 1343-1352, doi: 10.1016/j.ultramic.2009.06.010	2009

Awards

1	QuartaA, Di Corato R, Manna L, Argentiere S, Cingolani R, Barbarella G. and Pellegrino T.	Multifunctional Nanostructures Based on Inorganic Nanoparticles and Oligothiophenes and their Exploitation for Cellular Studies	received by Pellegrino Teresa from the Italian Chemical Society the National Award Primo Levi	2009
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Book Chapters

1	Manna L, Kudera S.	Mechanisms underlying the growth of inorganic nanoparticles in the liquid phase'	<i>Advanced Wet-Chemical Synthetic Approaches to Inorganic Nanostructures</i> , Edited by P.D. Cozzoli, Research Signpost, Kerala, India	2008
2	Dorfs D, Krahne R, Giannini C, Falqui A, Zanchet D, Manna L.	Synthesis and characterization of quantum dots	Comprehensive Nanoscience and Technology, Edited by David Andrews, Greg Scholes and Gary	2009

			Wiederrecht, Elsevier, (<i>in press</i>)
3	Ragusa A, Zacheo A, Pellegrino T, Manna L.	Quantum dot Nanoparticles: Properties, Surface Functionalization, and their applications in biosensing and imaging'	Nanostructured Materials for Biomedical Applications, Edited by M. C. Tan, Transworld Research Network, Kerala, India (<i>in press</i>) 2009
4	Deka S, Figuerola A, Dorfs D, Manna L.	Hybrid Nanocrystals: Synthesis, characterization and optical and magnetic properties	Encyclopedia of Semiconductor Nanotechnology, Edited by Ahmad Umar, American Scientific Publishers (<i>in press</i>) 2010
5	Krahne R, Manna L.	Tetrapod-shaped semiconductor nanocrystals'	<i>Handbook of Nanophysics</i> , edited by Klaus Sattler, C&C Press – Taylor and Francis, (<i>in press</i>) 2010
6	Manna L, Krahne R.	Colloidal Inorganic Nanocrystals: Synthesis and Controlled Assembly	<i>Handbook of Nanofabrication</i> , edited by Stefano Cabrini and Satoshi Kawata, publisher is "Taylor & Francis Group LLC (<i>in press</i>) 2010

Computer imaging laboratory

	authors	title	publication	year
1	A. Perina, M. Cristani, V. Murino	Learning natural scene categories by selective multi-level feature extraction	Image and Vision Computing (<i>in press</i>)	2009
2	A. Perina, M. Cristani, U. Castellani, V. Murino, N.Jojic	Free energy score space	<i>Neural Information processing Systems NIPS 2009</i> (<i>in press</i>)	2009

3	M. Farenzena, A. Tavano, L. Bazzani, D. Tosato, G. Paggetti, G. Menegaz, V. Murino, M. Cristani	Social Interactions by Visual Focus of Attention in a Three-Dimensional Environment	Wks on Pattern Recognition and Artificial Intelligence for Human Behaviour Analysis (PRAI*HBA) (<i>in press</i>)	2009
4	L. Bazzani, M. Cristani, M. Bicego, V. Murino	Online Subjective Feature Selection for Occlusion Management in Tracking Applications	<i>Int'l Conf. on Image Processing ICIP '09</i> , Il Cairo, Egypt (<i>in press</i>)	2009
5	A. Perina, M. Cristani, U. Castellani, V. Murino, N. Jojic	A hybrid generative/discriminative classification framework based on free-energy terms	<i>Int'l Conf. on Computer Vision ICCV 2009</i> , Kyoto, Japan (<i>in press</i>)	2009
6	A. Carli, M. Bicego, S. Baldo, V. Murino,	Non-linear Generative Embeddings for Kernels on Latent Variable Models	<i>Subspace 2009 Workshop</i> (in association with <i>ICCV 2009</i>), Kyoto, Japan (<i>in press</i>)	2009
7	A. Perina, M. Cristani, U. Castellani, V. Murino	A new generative feature set based on entropy distance for discriminative classification	<i>Int'l Conf. on Image Analysis and Processing ICIAP '09</i> , Vietri sul Mare, Italy (<i>in press</i>)	2009
8	M. Bicego, M. Cristani, V. Murino, E. Pekalska, R.P.W. Duin	Clustering-based construction of Hidden Markov Models for Generative Kernels	<i>Int'l Wks. on Energy Minimization Methods in Computer Vision and Pattern Recognition EMMCVPR 2009</i> , Germany (<i>in press</i>)	2009
9	N. Jojic, A. Perina, M. Cristani, V. Murino, B. Frey	Stel component analysis: Modeling spatial correlations in image class structure	<i>IEEE Computer Vision and Pattern Recognition conference CVPR 2009</i> , Miami, FL, USA (<i>in press</i>)	2009
10	M. Cristani, A. Pesarin, C. Drioli, A. Tavano, A. Perina, V. Murino	Auditory Dialog Analysis and Understanding by Generative Modelling of Interactional Dynamics	<i>2nd IEEE Workshop on CVPR for Human communicative Behavior analysis CVPR4HB</i> (in association with <i>CVPR 2009</i>), USA (<i>in press</i>)	2009

11	M.Bicego, P.Lovato, B.Oliboni, A.Perina	Expression Microarray Classification using Topic Models	ACM Symposium On Applied Computing SAC 2010 (Bioinformatics track) (in press)	2010
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Nanophysics laboratory

	Authors	title	publication	year
1	F. Carbone, A. C. Barone, A. De Filippo, F. Beretta, A. D'Anna, A. D'Alessio	Coagulation and Adhesion of Nanoparticles generated in flame from droplets of Nickel Nitrate aqueous solutions	Chem. Eng. Trans., 16 , 87-94	2008
2	V. Iannotti, C. Aruta, G. Ausanio, A.C. Barone, C. Campana, S. Amoruso, L. Lanotte	Inhomogeneity effects on magnetic and magnetotransport properties of CoxCu100-x films produced by ultrashort pulsed laser deposition	J. Phys. D: Appl. Phys., 41 , 195006-195013	2008
3	D. Fragouli*, L. Persano, G. Paladini, D. Pisignano, R. Carzino, F. Pignatelli, R. Cingolani and A.Athanassiou	Reversible diffraction efficiency of photochromic-polymer gratings related to photoinduced dimensional changes	Functional Materials, 18(11) 1617-1623,	2008
4	D. Fragouli*, L. Persano, G. Paladini, D. Pisignano, R. Carzino, F. Pignatelli, R. Cingolani and A. Athanassiou	Reversible diffraction efficiency of photochromic-polymer gratings related to photoinduced dimensional changes	Advanced Functional Materials, 18 (2008), 1617—1623	2008
5	Caputo, G., Cortese, B., Nobile, C., Salerno, M., Cingolani, R., Gigli, G., Cozzoli, D., and Athanassiou, A.	Reversibly Light-Switchable Wettability of Hybrid Organic/Inorganic Surfaces With Dual Micro-/Nanoscale Roughness	Advanced Functional Materials. 19:1149-1157	2009

6	Messa, M., Canale, C., Marconi, E., Cingolani, R., Salerno, M., and Benfenati, F.	Growth cone three-dimensional morphology is modified by distinct micropatterned adhesion Substrates	IEEE Transactions on Nanobioscience. 8:161-168	2009
7	Salerno, M., Patra, N., Losso, R., and Cingolani, R.	Increased growth rate of anodic porous alumina by use of ionic liquid as electrolyte additive	Materials Letters. 63:1826-1829	2009
8	Salerno, M., Patra, N., and Cingolani, R.	Use of Ionic Liquid in Fabrication, Characterization and Processing of Anodic Porous Alumina	Nanoscale Research Letters. 4:865-872	2009
9	Patra, N., Salerno, M., Losso, R., and Cingolani, R.	Use of unconventional organic acids as anodization electrolytes for fabrication of porous alumina	IEEE Proc Nanotechnology. (<i>In press</i>)	2009
10	Lee A. Sgro, Patrizia Minutolo, Andrea De Filippo, Alberto C. Barone, Gianluca Lanzuolo, Antonio D'Alessio	Measurement of Nanoparticles of Organic Carbon in Non-Sooting Flame Conditions	P. Comb. Inst., 32 , 689-696.	2009
11	N. Patra, A. C. Barone, M. Salerno, G. Caputo, D. Cozzoli, A. Athanassiou	Thermal and mechanical characterization of PMMA-TiO ₂ nanocomposites	Adv. Mat. Res., 67 , 209-214.	2009
12	V. Iannotti, S. Amoruso, G. Ausanio, A.C. Barone, C. Campana, X. Wang, L. Lanotte	Ultrafast pulsed laser deposition as a method for the synthesis of innovative magnetic films	Appl. Surf. Sci., 255 , 5224-5227.	2009

13	D. Fragouli, A.M. Laera, P.P. Pompa, G. Caputo, V. Resta, M. Allione, L. Tapfer, R. Cingolani, A. Athanassiou	Localized formation and size tuning of CdS nanocrystals upon irradiation of metal precursors embedded in polymer matrices	Microel. Eng. 86, 816	2009
14	L. Gallus; S. Ferrando; C. Gambardella; A. Diaspro; P. Bianchini; V. Piazza; G. Bonanno; M. Milanese; P. Ramoino; G. Tagliafierro	The GABAergic-like system in the cyprid of <i>Balanus amphitrite</i> (=Amphibalanusamphitrite) (Cirripedia, Crustacea)	Biofouling, vol. 26 (2) pp. 155-165	2009
15	P. Ramoino; F. Dini; P. Bianchini; A. Diaspro; G. Guella; C. Usai	Biophysical effects of the natural product euplotin C on the Paramecium membrane	J Comp Physiol A Neuroethol Sens Neural Behav Physiol 195:1061–1069	2009
16	G. Vicidomini; M. C. Gagliani; K. Cortese; J. Krieger; P. Buescher; P. Bianchini; P. Boccacci; C. Tacchetti; A. Diaspro	A novel approach for correlative light electron microscopy analysis	MICROSCOPY RESEARCH AND TECHNIQUE 00:000–000	2009
17	I. Panfoli; D. Calzi; P. Bianchini; S. Ravera; A. Diaspro; G. Candiano; A. Bachi; M. Monticone; M. G. Aluigi; S. Barabino; G. Calabria; M. Rolando; C. Tacchetti; A. Morelli; I. M. Pepe	Evidence for aerobic metabolism in retinal rod outer segment disks	The International Journal of Biochemistry & Cell Biology	2009
18	P. Bianchini and A. Diaspro	SHIM and TPEM: getting more information from non linear excitation	Proceedings of SPIE	2009
19	E. Ronzitti; G. Vicidomini; V. Caorsi; A. Diaspro	Annular pupil filter under shot-noise condition for linear and non linear microscopy	Optics Express (2009) vol. 17 (8) pp. 6867- 880	2009

20	F. Cella; Z. Lavagnino; A. Diaspro	Non-linear effects and role of scattering in multiphoton imaging of thick biological samples	Proceedings of SPIE	2009
21	E. Ronzitti; F.Cella; A. Diaspro	Improving image formation from the illumination side: linear and non-linear excitation cases	Proceedings of SPIE	2009
22	A.Esposito; S. Schlachter; G. S. Kaminski Schierle; A. D. Elder; A. Diaspro; F. S. Wouters; C. F. Kaminski; A. I. Iliev	Quantitative fluorescence microscopy techniques	Methods in Molecular Biology, vol. 586 pp. 117-42	2009
23	P. Bianchini and A. Diaspro	Three-dimensional (3D) backward and forward second harmonic generation (SHG) microscopy of biological tissues	J Biophotonics (2008) vol. 1 (6) pp. 443-50	2009
24	R. S. Dahiya, B.Torre, R. Cingolani, G.Sandini	Voltage Tunable Sensitivity of Piezoelectric Materials Based Sensors and Actuators	IEEE Proc Nanotechnology. (<i>In press</i>)	2009
25	D. Fragouli, B.Torre, G.Bertoni, R.Buonsanti, R. Cingolani, A. Athanassiou	Preparation technique and microscopic investigation of nanocomposite films containing iron oxide aligned nanowires.	MICROSCOPY RESEARCH AND TECHNIQUE	2009

Nanofabrication laboratory

	Authors	Title	Publication	Year
1	G. Maruccio, E. Primiceri, P. Marzo, V. Arima, An. Della Torre, R. Rinaldi, T. Pellegrino, R. Krahne, R. Cingolani	A nanoelectrode-based biosensor for the detection of single biorecognition events	Analyst, 2009, 134, 2458	2009
2	F. Gentile, G. Das, M.L. Coluccio, F. Mecarini, A. Accardo, L. Tirinato, R. Tallerico, G. Cojoc, C. Liberale, F. De Angelis , E. Di Fabrizio	Ultra low concentrated molecular detection using superhydrophobic surface based biophotonics devices.	Microelectronics Engineering, DOI: 10.1016/j.mee.2009.11.083	2009
3	F. De Angelis, G. Das, P. Candeloro, M. Patrini, M. Galli, A. Bek, I. Maksymov, C. Liberale, L. C. Andreani, and E. Di Fabrizio	3D adiabatic compression of surface plasmon polaritons for nano-mapping at 10 nm spatial resolution	Nature Nanotechnology, DOI: 10.1038/NNANO.2009.348	2009
4	F. De Angelis; G. Das; P. Candeloro; M. Patrini; M. Galli; A. Bek; M. Lazzarino; I. Maksymov; C. Liberale; L. C. Andreani; E. Di Fabrizio	Nanoscale chemical mapping using three-dimensional adiabatic compression of surface plasmon polaritons	Nature Nanotechnology	2009
5	A. Lucotti; M. Casella; M. Tommasini; Gramatica; E. Di Fabrizio; G. Zerbi	Experimental and theoretical investigation of the apomorphine Raman spectrum	Journal of Raman Spectroscopy	2009
6	V. Garbin; B. Dollet; M. Overvelde; D. Cojoc; E. Di Fabrizio; L. van Wijngaarden; A. Prosperetti; N. de Jong; D. Lohse; M. Versluis	History force on coated microbubbles propelled by ultrasound	PHYSICS OF FLUIDS 21, 092003	2009