

Publications in the field of Materials science and Biophysics

Science of Advanced Materials (in press 2014) "Growth of photoluminescent cadmium sulphide quantum dots from soluble single source precursors in solution and in film" L. Stroea, A. K. Bansal, I.D.W. Samuel, S. Kowalski, S. Allard, U. Scherf, L. Ortolani, S. Cavallini, S. Toffanin, F. Antolini;

Physical Chemistry Chemical Physics Vol 16, 9556-9564, 2014 "Photophysical and structural characterisation of in situ formed quantum dots" A. K. Bansal, F. Antolini, M. T. Sajjad, L. Stroea, R. Mazzaro, S. Ramkumar, K.-J. Kass, S. Allard, U. Scherf and I. D. W. Samuel;

Journal of Nanomaterials Vol. 2012, 815696, 2012 "Time and temperature dependence of CdS nanoparticles grown in a polystyrene matrix" F. Antolini, E. Burresti, L. Stroea, V. Morandi, G. Accorsi, M. Blosi.

Express Polymer Letters Vol. 3(4), 219-225, 2009 "New fluorescent polymeric nanocomposites synthesized by antimony-dodecyl-mercaptide thermolysis in polymer" F. Capezzuto, G. Carotenuto, F. Antolini, E. Burresti, M. Palomba, P. Perlo

European Journal of Ceramic Society Vol. 29, 2411-2417, 2009 "Sintering, high temperature strength and oxidation resistance of liquid-phase-phase sintered SiC-AlN ceramics with addition of rare earth oxides" G. Magnani, F. Antolini, L. Beaulardi, E. Burresti, A. Coglitore, C. Mingazzini

Physica Status Solidi (B) Vol. 244(8), 2768-2781, 2007 "Direct synthesis of II-VI compound nanocrystals in polymer matrix" F. Antolini, T. Di Luccio, A.M. Laera, L. Mirengi, E. Piscopiello, M. Re, L. Tapfer.

Surface and Interface analysis Vol 38, 1285-1290, 2006 "Deposition and Characterization of Langmuir-Blodgett films of Cadmium arachidate/SWCNTs composites" F. Antolini, T. Di Luccio, E. Serra, P. Aversa, L. Tapfer, S. Sangiorgi

Surface and Interface analysis Vol 38(4), 462-468, 2006 "Influence of the matrix on the chemical surface bonds of ZnS and CdS nanoclusters obtained by chemical synthesis" Mirengi L., Antolini F., Tapfer L.

Materials Letters Vol 60, 2657-2661, 2006 "A solid state nuclear magnetic resonance study on the thermolytic synthesis of CdS nanoparticles in a polystyrene matrix" M. Pentimalli, F. Antolini, E.M. Bauer, D. Capitani, T. Di Luccio, S. Viel

Materials Letters Vol 60, 1095-1098, 2006 "Laser induced nanocomposite formation for printed nanoelectronics" F. Antolini, A. Ghezelbash, C. Esposito, L. Tapfer, B.A. Korgel

Materials Letters Vol 59, 3181-3187, 2005 "Structural characterization of CdS nanoparticles grown in polystyrene matrix by thermolytic synthesis" F. Antolini, M. Pentimalli, T. Di Luccio, R. Terzi, M. Schioppa, M. Re, L. Mirengi, L. Tapfer

Mat. Res. Soc. Symp. Proc. vol. 849 Z 2005 "CdS and ZnS nanoparticles growth in different reaction media: synthesis and characterization" F. Antolini, E. Trave, L. Mirengi, M. Re, G. Mattei, L. Tapfer and P. Mazzoldi;

Crystal Research and Technology Vol 40 (10-11), 948-954 2005 "Formation of II-VI nanocrystals in polymeric matrix: thermolytic synthesis and structural characterization"; F. Antolini, T. Di Luccio, M. Re, L. Tapfer

Mat. Res. Soc. Symp. Proc. vol. 847, EE13.22.1, 2005 "Structure of nanocomposite films of CdS nanoparticles in a polymer matrix" T. Di Luccio, B. Nickel, F. Antolini, M. Pentimalli, L. Tapfer;

Sensor and Actuators B-Chemical Vol. 111, pp171-180, 2005 "Carbon nanotubes-coated multi-transducing sensors for VOCs detection" M. Penza, G. Cassano, P. Aversa, F. Antolini, A. Cusano, A. Cutolo, M. Giordano, L. Nicolais;

Thin solid films Vol 472, pp 246-252, 2005 "Carbon nanotubes-based surface acoustic waves oscillating sensor for vapor detection" M. Penza, F. Antolini, M. Vittori-Antisari;

Applied Physics Letters Vol 85(12), pp 2379-2381, 2004, "Alcohol detection using carbon nanotubes acoustic and optical sensors" M. Penza, G. Cassano, P. Aversa, F. Antolini, A. Cusano, A. Cutolo, M. Giordano, L. Nicolais;

Sensors and actuators B Vol. 100, pp47-59, 2004 "Carbon nanotubes as SAW chemical sensors materials" M. Penza, F. Antolini, M. Vittori-Antisari

Carbon Vol 42, pp 1119-1122, 2004 Structural and morphological investigation of Langmuir-Blodgett SWCNT/behenic acid multilayers" T. Di Luccio, F. Antolini, P. Aversa, G. Scalia, L. Tapfer;

Langmuir Vol 12, pp1545-1549, 1996 "Ordered monolayer of cytochrome c via chemical derivatisation of its outer arginine" A. Riccio, M. Lanzi, F. Antolini, C. De Nitti, C. Tavani, C. Nicolini;

Thin Solid Films Vol. 268, pp 108-113, 1995 «Langmuir-Blodgett film of Glutathione S-Transferase immobilized on silanized surfaces" S. Paddeu, F. Antolini, T. Dubrovsky and C. Nicolini;

Langmuir Vol. 11(7), pp 2719-2725, 1995 "Heat stable Langmuir-Blodgett film of Glutathione-S-Transferase". F.Antolini, S.Paddeu and C. Nicolini;

Thin Solid Films Vol 254, pp 252-256 1995 "Effect of the temperature on optical properties of reaction centres organized in Langmuir-Blodgett film" F.Antolini, M.Trotta and C.Nicolini;

Thin Solid Films Vol. 237, pp 19-21, 1994 "Chemically induced anisotropy in antibody Langmuir-Blodgett films" P.Facci, V.Erokhin, F.Antolini and C.Nicolini;

Biochimica et Biophysica Acta: Vol 1158, pp 273-278, 1993 "Thermal stability of protein secondary structure in Langmuir-Blodgett films" C.Nicolini, V.Erokhin, F.Antolini, P.Catasti and P.Facci;

Progress in Colloid & Polymer Science Vol. 93, 228, 1993 "Thermal stability of photosynthetic reaction centers from Rhodobacter Spheroids in Langmuir-Blodgett films, studied by circular dichroism measurements" V. Erokhin, F. Antolini, Facci P., Nicolini C.

Physics world: Vol. 5, pp 30-34, 1992. "Biosensors: a step to bioelectronics" C.Nicolini, M.Adami, F.Antolini, F.Beltram, M.Sartore, S.Vakula;

J. of Raman Spectroscopy: Vol. 19, pp423-428, 1988. "Phonon spectra and unit cell analysis of 2-Cyanothiophene" R.S.Cataliotti, F.Antolini, F.Santinelli, S.Santini.

Publications in the field of biochemistry and molecular biology

Clinica Chimica Acta Vol. 358, 87-94, 2005 "Principal component analysis of some oxidative stress parameters and their relationships in hemodialytic and transplanted patients" F. Antolini, F. Valente, D. Ricciardi, M Baroni, R.M. Fagugli

Clinical Nephrology Vol 62, pp131-137, 2004 "Normalisation of oxidative stress parameters after kidney transplantation is secondary to full recovery of renal function" F.Antolini, Fabrizio Valente, Daniela Ricciardi, Riccardo Maria Fagugli

Protein expression and purification Vol 29, 94-102, 2003 "Purified PML heptad repeats aggregates as a tetramer displaying low α -helical content" F.Antolini, M. Lobello, M. Sette

Nephrology Dialysis Transplantation Vol 17(5), 871-878, 2002 "Daily haemodialysis improves indices of protein glycation" A.Floridi, F.Antolini, F.Galli, R.M.Fagugli, A.Floridi, U.Buoncrisiani

International Journal of Artificial Organs Vol. 24(5), 256-262, 2001 "Advanced glycation end products: specific fluorescence changes of pentosidine like compounds during short daily hemodialysis" R.M. Fagugli, R. Vanholder, R. De Smet, A. Selvi, F. Antolini, N. Lameire, A. Floridi and U. Buoncrisiani.

Tecniche nefrologiche e dialitiche (Nephrologic and dialytic techniques), 217-234, 2000, Ed. Bios Cosenza "Iperomocisteinemia, nuovo fattore di rischio vascolare nell'uremico" (Hyperhomocysteinemia new risk factor for the uremic) Floridi A., Monni M., Antolini F., Galli F., Bianchi J., Floridi E., Buoncrisiani U.

Tecniche nefrologiche e dialitiche (Nephrologic and dialytic techniques), 309-322, 1998, Ed. Bios Cosenza "AGE e uremia" (AGE and uremia) Floridi A., Buoncrisiani U., Paolotti P., Antolini F.

Oncogene: Vol 5, pp 267-275, 1990. "Characterization of human and mouse c-fes gene cDNA clones and identification of the 5' end of the gene" M.Alcalay, F.Antolini, W.J.Van de Ven, L.Lanfrancone, F.Grignani, P.G.Pellicci.

Publications in the field of food and environmental biochemistry

American Journal of Environmental Sciences Vol 4(4), 259-265, 2008 "Characterization of maturity level in laying hen manure by chemical and physical methods" A. Dall'Ara, F. Antolini, L. Billi, C. Mingazzini, S. Sangiorgi

Zootecnia e Nutrizione Animale Vol 26, 197-206, 2000 "Delayed enhanced lanthanide fluorescence (DELFLIA) chemiluminescence immunoassays and RIA for the evaluation of 17 β -estradiol in bovine serum" F. Antolini G. Bolletta

Industria Alimentari Vol. 39, 685-690 2000 "Aflatoxin M₁ in milk: development of analytical and sampling strategies for the quality control in the dairy factories" Antolini F., Neri A., Floridi Al, Franciosini S., Floridi A.

Italian Journal of Food Science Vol 11(4), 335-347, 1999 "An ion pair HPLC method for the determination of histamine, tyramine, tryptamine, β -phenylethylamine and their aminoacid precursors in cheeses for industrial purposes" Antolini F., Franciosini S., Floridi Al., Floridi A.

Congress Proceedings

Atti VIII Convegno rete Italiana LCA "Valutazione della sostenibilità di nuove tecnologie: produzione di QDsLED con stampaggio tramite "direct laser micropatterning" Simona Scalbi, Valentina Fantin, Francesco Antolini, pp 313-322, 2014

Laser Applications in Microelectronic and Optoelectronic Manufacturing (LAMOM) XVIII, Proc. of SPIE "Formation of Quantum Dots from Precursors in Polymeric Films by ps-Laser" Vol 8607, pp 021-0211, 2013;

Fotonica 2012, "Synthesis of CdS quantum dots from single source precursor for OLEDs/OLETs manufacturing" L. Stroea, F. Antolini, M. Lanzi, V. Morandi, L. Ortolani, A. Migliori C2_3, 2012, pp1-4, 2012

Dall'Analisi del Ciclo di Vita all'impronta Ambientale Proc. of "VI Convegno della rete italiana LCA "Approccio metodologico e screening LCA di nanocristalli di CdS" F. Cappellaro, S. Scalbi, L. Gallo, F. Antolini pp-70-78, 2012

Fotonica 2011 "Synthesis of metal chalcogenides quantum dots for OLEDs/OLETs manufacturing" L. Stroea, F. Antolini Proc. of Fotonica 2011 (Genova-Italy, 09-11 May 2011)

ICC2 Proceedings 2008 "Growth of CdS nanocrystals of different size in polymeric matrix" F. Antolini, V. Rosetti, E. Burrelli, S. Sangiorgi; (Verona – Italia 29/06-04/07 2008)

ECOMONDO 2006 "Caratterizzazione mediante analisi termica differenziale e diffrattometria a raggi X di pollina" A. Dall'Ara, C. Mingazzini, R. Zacchiroli, F. Antolini, S. Sangiorgi;

Mat. Res. Soc. Symp. Proc. vol. 879E Z3.32.1 2005 "CdS and ZnS nanoparticles growth in different reaction media: synthesis and characterization" F. Antolini, E. Trave, L. Mirengi, M. Re, G. Mattei, L. Tapfer and P. Mazzoldi; (S. Francisco MRS spring meeting 2005)

Mat. Res. Soc. Symp. Proc. vol. 847, EE13.22.1, 2004 " Study of nanocomposite films of CdS nanoparticles in a polymer matrix" T. Di Luccio, B. Nickel, F. Antolini, M. Pentimalli, L. Tapfer; (Boston fall meeting 2004)

Founded research projects

Coordinator of the European project LAMP (FP7 ICT n 247928 "LAser induced synthesis of polymeric nanocomposite Materials and development of micro-Patterned hybrid light emitting diodes (LED) and transistors (LET)" LAMP Project budget euro 2.300.000; ENEA budget euro 471.617; start date June 2010, duration three years.

Responsible of a research project for young researcher at the University of Perugia (1999-2000) with the title "Purificazione e caratterizzazione di un dominio proteico delle proteine responsabile della leucemia acuta promielocitica" ("Purification and characterization of a proteic domain of a protein responsible of acute promyelocitic leukemia").

Responsible of a C.N.R. project of two years (1990-1992) in the field of thin films formations by means of lipid modification, streptavidine and Langmuir-Blodgett technique.

Patents

Procedimento per la preparazione di nanocompositi all'interno di una matrice polimerica (Method to prepare nanocomposites inside a polymer matrix), F. Antolini, L. Ortolani Pat N° RM2014A000259, Filed May 2014

"Procedimento di formazione di nanocompositi indotta da laser per impieghi in nanoelettronica" (Method of nanocomposite formation by means laser and its use in nanoelectronics) F. Antolini, C. Esposito, E. Trave, L. Tapfer N° MI2006A001156, Filed 2006

"Ordered protein films obtained by means of chemical functionalisation and site-specific mutagenesis" F. Antolini and C. Nicolini N° IT.RM940484 (Italia). Filed July 1994.

"Tecnologia per la deposizione di film proteici di Langmuir-Blodgett sulla superficie di microparticelle" V. Erokhin, S. Vakula, P. Facci, F. Antolini, C. Nicolini. Pat. N° IT RM930659. Filed September 1993.

"A new general procedure for protein thermal stabilization by Langmuir-Blodgett technique" C. Nicolini, V. Erokhin, P. Facci, F. Antolini. Pat. N° GB9324327.7 (UK). Filed November 1993.

Technical Reports

"Formazione di nanocompositi indotta da laser per impieghi in nanoelettronica", F. Antolini, L. Tapfer, C. Esposito; 23/05/05 Ident. ING-P99G-R-001

"Protocolli di procedure standardizzate per la pulizia dei substrati di silicio destinati alla deposizione film sottili mediante tecnica Langmuir-Blodgett" F. Antolini, P. Aversa, F. De Riccardis 27/10/2004; Protocollo 18/05 Ident RTFISR-Ila2

"Studio e messa a punto dei parametri di deposizione di nanoparticelle con tecnica di deposizione Langmuir-Blodgett", F. Antolini, P. Aversa, T. Di Luccio, E. Serra, E. Trave; 27/10/2004, Protocollo 19/05 Ident. RTFISR-Ila2

Oral communications

Workshop LAMP Rome 12 April 2013 *"Nanocomposites and OLED/T for internal car lighting"* F. Antolini

5th International Symposium on Flexible Organic Electronics (ISFOE12) 2-5 July 2012 Thessaloniki; *"Laser induced synthesis of polymeric nanocomposite materials and development of Micro-Patterned hybrid light emitting diodes (LED) and transistors (LET)"* F. Antolini, L. Stroea, T. Kasponas, G. Raciukaitis, A. Bansal, I.D.W.Samuel, A. Hirzer, V. Schmidt, V. Morandi

Nanoforum 2011 (Rome 14-15 September 2011) *"The LAMP project"* F. Antolini

4th International Symposium on Flexible Organic Electronics (ISFOE11) 10-13 July 2011 Thessaloniki; *"Laser induced synthesis of polymeric nanocomposite materials and development of Micro-Patterned hybrid light emitting diodes (LED) and transistors (LET)"* F. Antolini, L. Stroea, S. Ramkumar, S. Allard, U. Scherf, N. Li Pira, M. Paderi, G. Raciukaitis, S. Toffanin, M. Muccini, G. Hedley, I.D.W. Samuel, A. Hirzer, V. Schmidt, G. Jakopic

Nanoforum Politecnico di Milano 27-28 Settembre 2006 *"Formation of II-VI nanocrystals in different reaction media: synthesis and characterization"* F. Antolini

VII° Convegno Materiali Nanofasici CNR (Roma) 16-17 september 2004 *"Thermolytic synthesis of CdS nanoparticles embedded in polystyrene matrix and their characterization"*; F. Antolini, M. Pentimalli, T. Di Luccio, R. Terzi, M. Schioppa, M. Re, E. Pesce, L. Mirengi, P. Rotolo and L. Tapfer

XI congresso nazionale Tabiano Terme 19-22.IX.1992 *"Streptavidin monolayers adsorbed onto biotin-lipid Langmuir-Blodgett film"*; F. Antolini, V. Erokhin, G. Mascetti and C. Nicolini.

Workshop CIREF (Centro Internazionale di Ricerca e Formazione) Bergamo 27/28 ottobre 1993; *"Thermal stability of photosynthetic reaction centers from Rhodospirillum rubrum in Langmuir-Blodgett films studied by circular dichroism measurements"*; F. Antolini, V. Erokhin, P. Facci and C. Nicolini.

"Interazione della ricerca biochimica con l'attività produttiva di aziende lattiero-casearie" Società Italiana di Biochimica e Biologia Molecolare Annual Meeting T.U.M. Firenze 27 May 2000; F. Antolini F. Floridi

"Clonaggio, purificazione e preliminare caratterizzazione strutturale e funzionale delle eptadi della proteina PML", 1st scientific day of the Faculty of Pharmacy of the University of Perugia 20 October 2000, F. Antolini