

## **Publications (last five years)**

- E.Fazio, B.Gökce, A.De Giacomo, M.Meneghetti, G.Compagnini, M.Tomasini, F.Waag, A.Lucotti, C.G.Zanchi, P.M.Ossi, M.Dell'Aglio, L.D'Urso, M.Condorelli, V.Scardaci, F.Biscaglia, L.Litti, M.Gobbo, G.Gallo, M.Santoro, S.Trusso, F.Neri "Nanoparticles Engineering by Pulsed Laser Ablation in Liquids: Concepts and Applications" *Nanomaterials* vol.10, pp.2317 (2020)
- V.Scardaci, L.Fichera, M.E.Fragalà, N.Tuccitto, G.Marletta, G.Compagnini "Reduction of Graphene Oxide by Laser Scribing in Different Atmospheres and Application in Humidity Sensing" *Journal of Nanomaterials*, vol.2020, pp.4946954 (2020)
- S.Filice, R.Fiorenza, R.Reitano, S.Scalese, S.Scire, G.Fisicaro, I.Deretzi, A.La Magna, C.Bongiorno, G.Compagnini "TiO<sub>2</sub> Colloids Laser-Treated in Ethanol for Photocatalytic H<sub>2</sub> Production" *ACS Applied Nano Materials* 3, 9127-9140 (2020)
- V.Amendola, D.Amans, Y.Ishikawa, N.Koshizaki, S.Scirè, G.Compagnini, S.Reichenberger, S.Barcikowski "Room-Temperature Laser Synthesis in Liquid of Oxide, Metal-Oxide Core-Shells, and Doped Oxide Nanoparticles" *Chemistry* vol.26, pp.9206 (2020)
- M.Bellardita, R.Fiorenza, L.D'Urso, L.Spitaleri, A.Gulino, G.Compagnini, S.Scirè, L.Palmisano "Exploring the Photothermo-Catalytic Performance of Brookite TiO<sub>2</sub>-CeO<sub>2</sub> Composites" *Catalysts* vol.10, pp.765 (2020)
- E.Fazio, A.M.Mezzasalma, L.D'Urso, S.Spadaro, F.Barreca, G.Gallo, F.Neri, G.Compagnini "N-TiO<sub>2-x</sub> Nanocatalysts: PLAL Synthesis and Photocatalytic Activity" *Journal of Nanomaterials* vol.2020, pp.2901516 (2020)
- S.Savoca, T.Bottari, E.Fazio, M.Bonsignore, M.Mancuso, G.M.Luna, T.Romeo, L.D'Urso, G.Capillo, G.Panarello, S.Greco, G.Compagnini, G.Lanteri, R.Crupi, F.Neri, N.Spanò "Plastics occurrence in juveniles of Engraulis encrasicolus and Sardina pilchardus in the Southern Tyrrhenian Sea" *Science of The Total Environment* vol.718, pp.137457 (2020)
- B.Fu, P.Wang, Y.Li, M.Condorelli, E.Fazio, J.Sun, L.Xu, V.Scardaci, G.Compagnini "Passively Q-switched Yb-doped all-fiber laser based on Ag nanoplates as saturable absorber" *Nanophotonics* vol. 9, pp.37873-3880 (2020)
- M.Censabella, V.Torrisi, G.Compagnini, M.G.Grimaldi, F.Ruffino "Fabrication of metal nanoparticles-graphene nanocomposites and study of the charge transfer effect" *Physica E: Low-dimensional Systems and Nanostructures* vol.118, pp.113887 (2020)
- C.La Rosa, M.Condorelli, G.Compagnini, F.Lolicato, D.Milardi, T.N.Do, M.Karttunen, M.Pannuzzo, A.Ramamoorthy, F.Fraternali, F.Collu, H.Rezaei, B.Strodel, A.Raudino "Symmetry-breaking transitions in the early steps of protein self-assembly" *European Biophysics Journal* vol.49, pp. 175-191 (2020)
- V.Scardaci, M.Pulvirenti, M.Condorelli, G.Compagnini "Monochromatic light driven synthesis and growth of flat silver nanoparticles and their plasmon sensitivity" *Journal of Materials Chemistry C* vol. 8, pp.9734-9741 (2020)
- G.Fisicaro, S.Filice, S.Scalese, G.Compagnini, R.Reitano, L.Genovese, S.Goedecker, I.Deretzi, A.La Magna "Wet Environment Effects for Ethanol and Water Adsorption on Anatase TiO<sub>2</sub> (101) Surfaces" *The Journal of Physical Chemistry C* vol. 124, pp.2406-2419 (2019)
- R.Fiorenza, S.Scire', L.D'Urso, G.Compagnini, M.Bellardita, L.Palmisano "Efficient H<sub>2</sub> production by photocatalytic water splitting under UV or solar light over variously modified TiO<sub>2</sub>-based catalysts" *International Journal of Hydrogen Energy* vol.44, pp.14796-14807 (2019)
- S.Filice, G.Urzì , R.G.Milazzo , S.M.S.Privitera, S.A.Lombardo, G.Compagnini, S. Scalese "Applicability of a New Sulfonated Pentablock Copolymer Membrane and Modified Gas Di fusion Layers for Low-CostWater Splitting Processes" *Energies* vol.12, p.2064 (2019)

- S.Wang, Y.Yu, S.Luo,X.Cheng, G.Feng, Y.Zhang, Z.Wu, G.Compagnini, J.Pooran, A.Hu, "All-solid-state supercapacitors from natural lignin-based composite film by laser direct writing" *Applied Physics Letters* vol.115, p.083904 (2019)
- T.Bottari, S.Savoca, M.Mancuso, G.Capillo, G.Panarello, M.Bonsignore, R.Crupi, M.Sanfilippo, L.D'Urso, G.Compagnini, F.Neri, T.Romeo, G.M.Luna, N.Spanò, E.Fazio "Plastics occurrence in the gastrointestinal tract of Zeus faber and Lepidopus caudatus from the Tyrrhenian Sea" *Marine Pollution Bulletin* vol.146, pp.408–416 (2019)
- S.Savoca, G.Capillo, M.Mancuso, C.Faggio, G.Panarello, R.Crupi, M.Bonsignore, L.D'Urso, G.Compagnini, F.Neri, E.Fazio, T.Romeo, T.Bottari, N.Spanò "Detection of artificial cellulose microfibers in Boops boops from the northern coasts of Sicily (Central Mediterranean)" *Science of the Total Environment* vol.691, pp.455–465 (2019)
- M.Condorelli, V.Scardaci, L.D'Urso, O.Puglisi, E.Fazio, G.Compagnini "Plasmon sensing and enhancement of laser prepared silver colloidal nanoplates" *Applied Surface Science* vol.475, pp.633-638 (2019)
- M.Condorelli, V.Scardaci, L.D'Urso, O.Puglisi, E.Fazio, G.Compagnini "Optical data related to Ag nanoplates utilized for plasmon sensing" *Data in Brief* vol.23, pp.103798 (2019)
- E.Petronijevic, G.Leahu, V.Di Meo, A.Crescetti, P.Dardano, G.Coppola, E.Esposito, I.Rendina, M.Miritello, M.G.Grimaldi, V.Torrisi, G.Compagnini, C.Sibilia "Near-infrared modulation by means of GeTe/SOI-based metamaterial" *Optics letters* vol.44, pp.1508-1511 (2019)
- V.Torrisi, M.Censabella, G.Piccitto, G.Compagnini, M.G.Grimaldi, F.Ruffino "Characteristics of Pd and Pt Nanoparticles Produced by Nanosecond Laser Irradiations of Thin Films Deposited on Topographically-Structured Transparent Conductive Oxides" *Coatings* vol.9, pp.68 (2019)
- D.D'Angelo, S.Filice, A.Scarangella, D.Iannazzo, G.Compagnini, S.Scalese "Bi<sub>2</sub>O<sub>3</sub>/Nexar® polymer nanocomposite membranes for azo dyes removal by UV-vis or visible light irradiation" *Catalysis Today* vol.321, pp.158-163 (2019)
- G.Compagnini, M.Condorelli, M.E.Fragalà, V.Scardaci, I.Tinnirello, O.Puglisi, F.Neri, E.Fazio "Growth Kinetics and Sensing Features of Colloidal Silver Nanoplates" *Journal of Nanomaterials* Vol.2019, Art.ID 7084731 (2019)
- L.D'Urso, M.Condorelli, O.Puglisi, C.Tempra, F.Lolicato, G.Compagnini, C.La Rosa "Detection and characterization at nM concentration of oligomers formed by hIAPP, Aβ(1-40) and their equimolar mixture using SERS and MD simulation" *Phys.Chem.Chem.Phys.* vol.20, pp. 20588-20596 (2018)
- D.D'Angelo, S.Filice, M.Miritello, C.Bongiorno, E.Fazio, F.Neri, G.Compagnini, S.Scalese "β-Bi<sub>2</sub>O<sub>3</sub> reduction by laser irradiation in liquid environment" *Phys. Chem. Chem. Phys.*, vol.20, pp.10292-10301 (2018)
- L.D'Urso, S.Spadaro, M.Bonsignore, S.Santangelo, G.Compagnini, F.Neri, E.Fazio "Zinc oxide nanocolloids prepared by picosecond pulsed laser ablation in water at different temperatures" *EPJ Web of Conferences* vol.167, pp.04008 (2018)
- R.G.Urso, C.Scirè, G.A.Baratta, J.R.Brucato, G.Compagnini, Z.Kaňuchová, M.E.Palumbo, G.Strazzulla, "Infrared study on the thermal evolution of solid state formamide" *Phys. Chem. Chem. Phys.* vol.19, pp.21759-21768 (2017)
- S.Filice, G.Compagnini, R.Fiorenza, S.Scirè, L.D'Urso, M.E.Fragalà, P.Russo, E.Fazio, S.Scalese "Laser processing of TiO<sub>2</sub> colloids for an enhanced photocatalytic water splitting activity" *J.Coll.Interf.Sci.* vol.489, pp.131-137 (2017)
- S.Wang, Y.Yu, R.Li, G.Feng, Z.Wu, G.Compagnini, A.Gulino, Z.Feng, A.Hu "High-performance stacked in-plane supercapacitors and supercapacitor array fabricated by femtosecond laser 3D direct writing on polyimide sheets" *Electrochimica Acta* vol.241, pp.153-161 (2017)

- S.Filice, D.D'Angelo, A.Scarangella, D.Iannazzo, G.Compagnini, S.Scalese "Highly effective and reusable sulfonated pentablock copolymer nanocomposites for water purification applications" RSC Advances, vol.7, pp. 45521–45534 (2017)
- R.G.Urso, C.Scirè, G.A.Baratta, G.Compagnini, M.E.Palumbo "Combined IR and Raman study of solid CO" Astronomy & Astrophysics vol. 594, pp.A80-1-9 (2016)
- A.Di Mauro, R.Randazzo, S.F.Spanò, G.Compagnini, M.Gaeta, L.D'Urso, R.Paolesse, G.Pomarico, C.Di Natale, V.Villari, N.Micali, M.E.Fragalà, A.D'Urso, R.Purrello "Vortexes tune the chirality of graphene oxide and its non-covalent hosts" Chem. Commun., vol. 52, pp.13094-13096 (2016)
- R.Fiorenza, M.Bellardita, L.D'Urso, G.Compagnini, L.Palmisano, S.Scirè "Au/TiO<sub>2</sub>-CeO<sub>2</sub> Catalysts for Photocatalytic Water Splitting and VOCs Oxidation Reactions" Catalyst vol.6 p. 121 (2016)
- C.Tudisco, M.E.Fragala, A.Giuffrida, F.Bertani, R.Pinalli, E.Dalcanale, G.Compagnini, G.GCondorelli, "Hierarchical Route for the Fabrication of Cavitand-Modified Nanostructured ZnO Fibers for VOC Detection" J.Phys.Chem. C vol. 120, pp.12611–12617 (2016)
- E.Fazio, L.D'Urso, S.Santangelo, R.Saija, G.Compagnini, F.Neri, "The activation of non-linear optical response in Ag@ZnO nanocolloids under an external highly intense electric field" Nuovo Cimento C vol.39, pp.307 (2016)
- G.Messina, M.Sinatra, V.Bonanni, R.Brescia, A.Alabastri, F.Pineider, G.Campo, C.Sangregorio, G.Li-Destri, G.Sfuncia, G.Marletta, M.Condorelli, Z.Proietti Zaccaria, F.De Angelis, G.Compagnini "Tuning the Composition of Alloy Nanoparticles Through Laser Mixing: The Role of Surface Plasmon Resonance" J.Phys.Chem. C vol.120 pp. 12810–12818 (2016)
- M.A.Buccheri, D.D'Angelo, S.Scalese, S.Spanò, S.Filice, E.Fazio, G.Compagnini, M.Zimbone, M.V.Bruno, R.Pecoraro, A.Alba, F.Sinatra, G.Rappazzo, V.Privitera "Modification of graphene oxide by laser irradiation: a new route to enhance antibacterial activity" Nanotecnology vol.27 pp. 245704 (2016)
- R.Z.Li, R.Peng, K.D.Kihm, S.Bai, D.Bridges, U.Tumuluri, Z.Wu, T.Zhang, G.Compagnini, Z.Feng,A.Hu "High-rate in-plane micro-supercapacitors scribed onto photo paper using in situ femtolaser-reduced graphene oxide/Au nanoparticle microelectrodes" Energy & Environmental Science vol.9 pp.1458-1467 (2016)
- S.Filice, D.D'Angelo, S.F.Spanò, G.Compagnini, M.Sinatra, L.D'Urso, E.Fazio, V.Privitera, S. Scalese "Modification of graphene oxide and graphene oxide-TiO<sub>2</sub> solutions by pulsed laser irradiation for dye removal from water" Materials Science in Semiconductor Processing vol.42, pp.50–53 (2016)
- M.Zimbone, E.Messina, G.Compagnini, M.E.Fragalà, L.Calcagno "Resonant depolarized dynamic light scattering of silver nanoplatelets" J.Nanop.Res. vol.17 pp.402-1-8 (2015)
- P.Russo, L.D'Urso, A.Hu, N.Zhou, G.Compagnini "In liquid laser treated graphene oxide for dye removal" Appl.Surf.Sci. vol.348 pp.85-91 (2015)
- D.D'Angelo, C.Bongiorno, M.Amato, I.Deretzi, A.La Magna, G.Compagnini, S.F.Spanò, S.Scalese "Electron energy-loss spectra of graphene oxide for the determination of oxygen functionalities" Carbon vol.93 pp.1034-1041 (2015)
- R.Randazzo, A.Di Mauro, A.D'Urso, G.C.Messina, G.Compagnini, V.Villari, N.Micali, R.Purrello, M.E.Fragala "Hierarchical Effect Behind the Supramolecular Chirality of Silver (I)-Cysteine Coordination Polymers" J. Phys. Chem. B vol.119 pp.4898–4904 (2015)
- E.Messina, M.G. Donato, M.Zimbone, R.Saija, M.A.Iatì, L.Calcagno, M.E.Fragalà, G.Compagnini, C.D'Andrea, A.Foti, P.G.Gucciardi, O.M.Maragò "Optical trapping of silver nanoplatelets" Optics Express vol.23 pp.8720-8730 (2015)