

Publication list

Reviews

2013 Giordano C.*, Corbiere T., "A step forward in metal nitride and carbide synthesis: from pure nanopowders to nanocomposites", *Colloids and Polymer Science*, 291, 6, 1297-1311, Invited paper

2011 Giordano C.*, Antonietti M., "Synthesis of Crystalline Metal nitride and Metal carbide Nanostructures by Sol-Gel Chemistry", *Nano Today*, 6, 366

2017-2018

Armetta F, Saladino M.L., Giordano C.* Defilippi C., Marciniak L., Hreniak D., Caponetti E., Non-conventional rare-earth doped YAG nanostructures via urea complexes, **submitted**

Armetta F, Defilippi C., Giordano C., Caponetti E. Marciniak L., Hreniak D., Saladino M.L., Ce:YAG supported on glass wool: effect of cerium content and heat treatment, **submitted**

Defilippi C., Mukadam M., Nicolae S., Lees M., Giordano C.*, Iron Carbide@Carbon Nanocomposites: a Tool Box of Functional Materials, **submitted**

- 60** García-Márquez A., Glatze S., Kraupner A., Kiefer K., Siemensmeyer K., Giordano C.*, "Blossom-Like Iron Nitride and Carbide Magnetic Fibres via Electrospinning Technique", *Chem. Eur. J.*, **2018**, doi.org/10.1002/chem.201705585

2016

- 59** Maurice V., Clavel G., Antonietti M., Giordano C.*, "Aerosol-Assisted Synthesis of Porous TiN_xO_y@C Nanocomposites", *Chem. Eur. J.*, **2016**, 22, 11624 – 11630

- 58** Joshi U., Lee J., Giordano C., Malkhandi S., Yeo B.S., "Enhanced Catalysis of the Electrochemical Hydrogen Evolution Reaction by Molybdenum-Based Compounds, Gold Nanoparticles and Carbon Composites: Role of Mo, Au, N and C", *Physical Chemistry Chemical Physics*, **2016**, 18, 21548 – 21553

2015

- 57** Lei W.W., Willinger M.G., Antonietti M., Giordano C.*, "GaN and Ga_xIn_{1-x}N nanoparticles with tuneable indium content: synthesis and characterization", *Chemistry: Chem. Eur. J. Hot Paper, Commended with journal frontispiece*, *Chem. Eur. J.*, **2015**, 21, 18976 – 18982

- 56** Ma L., Louisa E.L., Molinari V., Giordano C., Yeo B.S., "Hydrogen Evolution Reaction by Molybdenum Carbide and Molybdenum Nitride Nanocatalysts Synthesized via a Urea-Glass Route", *J. Mater. Chem. A*, **2015**, 3, 8361-8368

- 55** Gupta S., Altin B., Giordano C., Gradzielski M., Metha S., "Noble Metal/Silica "raspberry" type Hybrids: Synthesis and Functionalization", *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2015**, 472, 50-56.

2014

- 54** Milke B., Wall C., Metzke S., Clavel G., Fichtner M., Giordano C.* "A simple synthesis of MnN_{0.43}@C core-shell nanoparticles for battery applications", *Journal of Nanoparticle Research*, 16(**2014**) pp.2895/1-8.

- 53** Molinari V., Esposito D., Giordano C., Antonietti M., "Titanium Nitride-Nickel Nanocomposites as Heterogeneous Catalysts for the Hydrogenolysis of Aryl Ethers: toward depolymerization of Lignin", *JACS*, 136(5):1758-61, **2014**

- 52** Cristina Giordano. "A Neglected World: Transition Metal Nitride and Metal Carbide Based Nanostructures Novel Synthesis and Future Perspectives" (**2014**): Habilitationsschrift (Universität Potsdam), https://publishup.uni-potsdam.de/opus4-ubp/files/7537/giordano_habil.pdf

- 51 Liu X., Giordano C., Antonietti M., "A Facile Molten-Salt Route to Graphene Synthesis", *Small*, **2014**, 10, No. 1, 193–20
- 50 Skorupska A. K., Giordano C.*, Gao Q.S., Lewerenz H.J., Ramirez-Caro A., Kulesza P.; Żołądek S., Fiechter S. Semiconducting Ta₃N₅-polymer Nanohybrid that Photoelectrolyze Water, *ECS Transactions*, **58**, 30, 1-7, **2014**
- 49 Esposito D., Molinari V., Giordano C., et al. "Chemical feedstocks from biomass: An integrated conversion scheme", *Abstracts of Papers of the American Chemical Society*, Volume: 247, MAR 16, **2014**
- 48 Clavel G., Molinari V., Kraupner A., Giordano C., "Easy access to Ni₃N- and Ni-carbon nanocomposite catalysts", *Chemistry: Chem. Eur. J.*, **20**, 9018-9023, **2014**
- 47 Chieffi G., Giordano C., Antonietti M., Esposito D., "FeNi nanoparticles with carbon armor as sustainable hydrogenation catalyst: towards biorefineries", *J. Mater. Chem. A*, **2**, 11591-11596, **2014**
- 46 Kaur R., Giordano C., Gradzielski M., Mehta S., "Synthesis of Long-Time Stable, Water Dispersible Copper Nanoparticles as Catalysts for Nitrobenzene Reduction", *Chem. Asian J.* **2014**, 9, 189 – 198
- 45 Shalom M., Molinari V., Esposito D., Clavel G., Ressnig D., Giordano C., Antonietti M., "Sponge like Nickel and Nickel Nitride Structures for Catalytic Applications", *Advanced Materials*, **2014**, 26(8), 1272-1276.

2013

- 44 Giordano C.*, Corbiere T., "A step forward in metal nitride and carbide synthesis: from pure nanopowders to nanocomposites", *Colloids and Polymer Science*, 291, 6, 1297-1311, **2013**, Invited paper
- 43 Schliehe C., Giordano C.*, "Bottom-up Synthesis of Zn_{1.7}GeN_{1.8}O Nanoparticles for Photocatalytic applications", *Nanoscale*, **5**, 3235-3239, **2013**, Advance Article
- 42 Corbiere T., Ressnig D., Giordano C., Antonietti M., "Focused Radiation Heating for Controlled High temperature Chemistry, exemplified with the Preparation of Vanadium Nitride Nanoparticles", *Rsc Advances.*, **2013**, 3: 15337-15343.
- 41 Glatzel S., Schnepf Z., Giordano C.*, "From paper to structured carbon electrodes by inkjet printing", *Angew. Chem. Int. Ed.*, **52**, 2355-2358, **2013**
- 40 Liu X., Giordano C., Antonietti M., Manipulation of phase and microstructure at nanoscale for SiC with molten salt synthesis: an unconventional ionothermal route", *Chem. Mat.*, **25**, 2021-2027, **2013**
- 39 Gupta S., Giordano C., Gradzielski M., Mehta K., "Microwave-Assisted Synthesis of Small Ru Nanoparticles and Their role in Degradation of Congo Red", *Journal of Colloid and Interface Science*, **2013**, 411, 173-181
- 38 Petkov V., Hessel C. M., Ovtchinnikoff J., Guillaussier A., Korgel B.A., Liu X, Giordano C., "Structure-Properties Correlation in Si Nanoparticles by Total Scattering and Computer Simulations", *Chem. Mater.*, **2013**, 25 (11), pp 2365–2371

2012

- 37 Liu X., Giordano C., Antonietti M., "A molten-salt route for synthesis of Si and Ge nanoparticles: chemical reduction of oxides by electrons solvated in salt melt", *Journal of Materials Chemistry*, **22**, 12, 5454-5459, **2012**
- 36 Gao Q. S., Giordano C., Antonietti M., "Biomimetic Oxygen Activation by MoS₂/Ta₃N₅ Nanocomposites for Selective Aerobic Oxidation", *Angewandte Chemie-Int- Ed.*, **51**, 47, 11740-11744, **2012**
- 35 Schliehe C., Yuan J., Glatzel S., Siemensmeyer K., Kiefer K., Giordano C.*, "Iron nitride and carbide: from crystalline

nanoparticles to stable aqueous dispersions”, *Chemistry of Materials*, 24, 2716–2721, **2012**

- 34** Villa A., Campisi S., Giordano C., Otte K., Prati L., “Mo and W carbide: tunable catalysts for liquid phase oxidation of alcohols”, *ACS Catal.* 2, 1377–1380, **2012**
- 33** Gao Q. S., Wang S. N., Tang Y., Giordano C., “Preparation of organic-inorganic hybrid Fe-MoOx/polyaniline nanorods as efficient catalysts for alkene epoxidation. *Chemical Communications* 48, 2, 260-262, **2012**
- 32** Gao Q., Wang S., Ma Y., Tang Y., Giordano C., Antonietti M., “SiO₂-Surface-Assisted Controllable Synthesis of TaON and Ta₃N₅ Nanoparticles for Alkene Epoxidation”, *Angew. Chem. Int. Ed.*, 51, 961–965, **2012**
- 31** Göbel R., Xie Z.L., Neumann M., Günter C., Löbbecke R., Kubo S., Titirici M.M., Giordano C.*, Taubert A., Synthesis of mesoporous carbon/iron carbide hybrids with unusually high surface areas from the ionic liquid precursor [Bmim][FeCl₄], *CrystEngComm*, 14, 4946–4951, **2012**

2011

- 30** Portehault D., Devi S., Beaunier P., Gervais, C., Giordano C., Sanchez S., Antonietti M., “A General Solution Route toward Metal Boride Nanocrystals.” *Angewandte Chemie Int. Ed.*, 50, 3262, **2011**, VIP paper
- 29** Garcia-Marquez A., Portehault D., Giordano C., “Chromium Nitride and Carbide Nanofibers: from Composites to Mesostructures”, *Journal of Materials Chemistry*, 21, 2136, **2011**
- 28** Gao Q., Giordano C.* , Antonietti M., “Controlled Synthesis of Tantalum Oxynitride and Nitride Nanoparticles”, *Small*, 7, 23, 3334-3340, **2011**
- 27** Yuan J., Schlaad H., Giordano C., Antonietti M., *Europ. Polym. Journal*, Special Issue, 47, 775, **2011**
- 26** Yuan J., García Márquez A., Reinacher J., Giordano C., Janek J., Antonietti M., “Nitrogen-doped carbon fibers and membranes by carbonization of electrospun poly(ionic liquid)s”, *Polymer Chemistry*, 2, 1654, **2011**
- 25** Giordano C.*, Kraupner A., Fleischer I., Henrich C., Klingelhöfer G., Antonietti M., “Non-Conventional Fe₃C-based nanostructures”, *Journal of Materials Chemistry*, 21, 42, 16963-16967, **2011**
- 24** Schnepf Z., Thomas M., Glatzel S., Schlicht K., Palkovits R., Giordano C.*, “One-pot route to sponge-like Fe₃N nanostructure”, *Journal of Materials Chemistry*, 21, 44, 17760-17764, **2011**
- 23** Giordano C.*, Antonietti M., “Synthesis of Crystalline Metal nitride and Metal carbide Nanostructures by Sol-Gel Chemistry”, *Nano Today*, 6, 366, **2011**
- 22** Giordano C., Yang W., Lindemann A., Crombez R., Texter J., “Waterbone WC Nanodispersions”, *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 374, 84, **2011**

2010

- 21** Texter J., Tambe N., Crombez R., Antonietti M., Giordano C., “Stimuli responsive coatings of carbon nanotubes and nanoparticles using ionic liquid-based nanolatexes”, *Polymeric Materials: Science & Engineering*, 102, 401, **2010**
- 20** Schnepf Z., Yang W., Antonietti M., Giordano C.*, “Biotemplating of Metal and Metal Carbide Microstructures: The Magnetic Leaf”, *Angewandte Chemie Int. Ed.*, 49, 6564, **2010**
- 19** Portehault D., Giordano C., Gervais C., Senkovska I., Sanchez C., Antonietti M. “High-Surface-Area Nanoporous Boron Carbon Nitrides for Hydrogen Storage”, *Advanced Functional Materials*, 20, 1827, **2010**
- 18** Yuan J., Giordano C., Antonietti M., “Ionic Liquids Monomers and Polymers as Precursors of highly Conductive, Mesoporous, Graphitic Carbon Nanostructures”, *Chemistry of Materials*, 22, 5003, **2010**

- 17 Giordano C.*, Kraupner A., Wimbush C.S., Antonietti M., "Iron Carbide: An Ancient Advanced Material", *Small*, 6, 1859, **2010**
- 16 Kraupner A., Antonietti M., Palkovits R., Schlicht K., Giordano C.*, "Mesoporous Fe₃C sponges as magnetic supports and as heterogeneous Catalyst", *Journal of Materials Chemistry*, 20, 6019, **2010**, [highlighted paper](#)
- 15 Portehault D., Giordano C., Sanchez C., Antonietti M., "Non Aqueous Route toward a Nanostructured Hybrid Titanate" *Chemistry of Materials*, 22, 2125, **2010**
- 14 Khare V., Kraupner A., Manton A., Jelacic A., Thunemann A., Giordano C.* and Taubert A., "Stable iron carbide nanoparticle dispersions in [Emim][SCN] and [Emim][N(CN)₂] ionic liquids", *Langmuir*, 26, 10600, **2010**
- 13 Schnepf Z., Wimbush S., Antonietti M., Giordano C.*, "Synthesis of Highly Magnetic Iron Carbide Nanoparticles via a Biopolymer Route", *Chemistry of Materials*, 22, 5340, **2010**
- 12 Makowski P., Giordano C., Goettmann F., et al., "CATL 40-Preparation of transition metal carbides and nitrides nanoparticles from urea and their use as alkylation catalysts", *Abstracts of Papers of the American Chemical Society*, Volume: 238, AUG 16, **2009**
- 11 Kraupner A., Antonietti M., Giordano C.*, "COLL 49-Synthesis of Fe₃C nanostructures by a simple chemical route", *Abstracts of Papers of the American Chemical Society*, Volume: 238, AUG 16, **2009**
- 10 Giordano C.*, Erpen C., Yao W.T., Milke B., Antonietti M., "Metal Nitride and Metal Carbide Nanoparticles by a Soft Urea Pathway", *Chemistry of Materials*, 21, (21), 5136, **2009**
- 9 Yao W. T., Makowski P., Giordano C.*, Goettmann F., "Synthesis of Early Transition Metal Carbides and Nitrides Nanoparticles via the Urea Route and their Use as Alkylation Catalysts", *Chemistry - A European Journal*, 15, (44), 11999, **2009**
- 8 Milke B., Antonietti M., Giordano C.*, *Nanoscale*, 1, (1), 110, **2009**
- 7 Giordano C.*, Erpen C., Yao W. T., Antonietti M., "Synthesis of Mo and W Carbide and Nitride Nanoparticles via a Simple "Urea Glass" Route" *Nano Letters*, 8, (12), 4659, **2008**

Publications from the PhD research

- 6 Calandra P., Giordano C., Longo A., Turco Liveri V., "Physicochemical investigation of surfactant-coated gold nanoparticles synthesized in the confined space of dry reversed micelles" *Materials Chemistry and Physics* 98, 494-499, **2006**
- 5 Longo A., Calandra P., Casaletto M.P, Giordano C., Venezia A.M., Turco Liveri V., "Synthesis and physico-chemical characterization of gold nanoparticles softly coated by AOT" *Materials Chemistry and Physics* 96, 66-72, 2006, **2006**
- 4 Bongiorno D., Ceraulo L., Ferrugia M., Filizzola F., Giordano C., Ruggirello A., Turco Liveri V., "1H-NMR and FT-IR study of the state of melatonin confined in membrane models: location and interactions of melatonin in water free lecithin and AOT reversed micelles", *ARKIVOC* 251, **2004**
- 3 Calandra P., Giordano C., Ruggirello A., Turco Liveri V., "Physico-chemical investigation of acrylamide solubilisation in sodium bis(2-ethylhexyl) sulfosuccinate and lecithin reversed micelles", *J. Coll. Interf. Sci.*, 277, 206-214, **2004**
- 2 Giordano C., Longo A., Ruggirello A., Turco Liveri V., Venezia, A.M., "Physicochemical Investigation of Cobalt-Iron Cyanide Nanoparticles Synthesized by a Novel Solid-Solid Reaction in Confined Space", *Coll. Polym. Sci*, 283, 265-276, **2004**

Publications from the Diploma research

- 1 Giordano C., Longo A., Turco Liveri V., Venezia A.M., "Physico-Chemical Investigation of the Solubilization of Cobalt Nitrate in AOT Reverse Micelles", *Coll. Polym. Sci*, 281, 229-238, **2003**