Peer reviewed papers

- "**Nitrile hydration to amide in water: Palladium-based nanoparticles vs molecular catalyst**", W.Oberhauser, M. Bartoli, G.Petrucci, D.Bandelli, M.Frediani, L.Capozzoli, C.Cepek, S.Bhardwaj, L.Rosi, Journal of molecular catalysis A: chemicals, *410*, **2015**, 26-33 **DOI:** 10.1016/j.molcata.2015.09.003
- **"Palladium-nanoparticles on end-functionalized poly(lactic acid)-based stereocomplexes for the chemoselective cinnamaldehyde hydrogenation: Effect of the end-group"** W. Oberhauser; C. Evangelisti; R.P. Jumde; G. Petrucci; M. Bartoli; M. Frediani; M. Mannini; L. Capozzoli; E. Passaglia; L. Rosi, Journal of Catalysis, *330*, **2015**, 187-196 **DOI:** 10.1016/j.jcat.2015.07.012
- "**Depolymerization of polystyrene at reduced pressure through a microwave assisted pyrolysis**" M.Bartoli, L.Rosi, M.Frediani, A.Undri, P.Frediani, Journal of Analytical and Applied Pyrolysis *113*, **2015**, 281-287 **DOI:** 10.1016/j.jaap.2015.01.026
- "**A simple procedure for chromatographic analysis of bio-oils from pyrolysis"** A.Undri, M. Abou-Zaid, C.Briens, F.Berruti, L.Rosi, M.Bartoli, M Frediani, P. Frediani,Journal of Analytical and Applied Pyrolysis , *114*, **2015**, 208-221 **DOI:** 0.1016/j.jaap.2015.05.019
- "**Synthesis of Dianols or BPA through catalytic hydrolyisis/glycolysis of waste polycarbonates using a microwave heating**" L.Rosi, M.Bartoli, A.Undri, M.Frediani, P.Frediani Journal of molecular catalysis A: chemicals, *408*, **2015**, 278-286 **DOI:** 10.1016/j.molcata.2015.07.027
- "**Pyrolysis of α–cellulose using a multimode microwave oven**" M.Bartoli, L.Rosi, A.Giovannelli, P. Frediani, M.Frediani, Journal of Analytical and Applied Pyrolysis *120*, **2016**, 284-296 **DOI:** 10.1016/j.jaap.2016.05.016
- "**Bio-oil from residues of short rotation coppice of poplar using amicrowave assisted pyrolysis**" M.Bartoli, L.Rosi, A.Giovannelli, P.Frediani, M.Frediani Journal of Analytical and Applied Pyrolysis *119*, **2016**, 224-232 **DOI:** 10.1016/j.jaap.2016.03.001
- "**Production of bio-oils and biochar through microwave assisted pyrolysis of *Arundo donax* in a multi mode batch reactor**" M.Bartoli, L.Rosi, A.Giovannelli, P. Frediani, M.Frediani, Journal of Analytical and Applied Pyrolysis, *120*, **2016**, 479-489 **DOI:** 10.1016/j.jaap.2016.10.016
- "**Platinum nanoparticles onto pegylated poly(lactic acid) stereocomplex for highly selective hydrogenation of aromatic nitrocompounds to anilines**" W. Oberhauser, C. Evangelisti, C. Tiozzo; M. Bartoli; M. Frediani; E. Passaglia; L. Rosi, Applied Catalysis A: General, *537*, **2017**, 50-58 **DOI:** 1016/j.apcata.2017.03.003
- **"Microwave assisted pyrolysis of halogenated plastics recovered from waste computers"** L. Rosi, M.Bartoli, M.Frediani, Waste management, *73*, **2018**, 511-522 **DOI:** 10.1016/j.wasman.2017.04.037
- "**Bio-oil from pyrolysis of wood pellets using a microwave multimode oven and different microwave absorbers**" A.Undri, M.A. Zaid, C.Briens, F.Berruti, L.Rosi, M.Bartoli, M.Frediani, P.Frediani, Fuel, *153*, **2015**, 464-482 **DOI:** 10.1016/j.fuel.2015.02.081
- **Pd-nanoparticles supported onto functionalized poly(lacticacid)-based stereocomplexes for partial alkyne hydrogenation**" G. Petrucci, W. Oberhauser, M. Bartoli, G. Giachi, M. Frediani, E. Passaglia, L. Capozzoli, L. Rosi, Applied Catalysis A: General *469*, **2014**, 132– 138 **DOI**: 10.1016/j.apcata.2013.09.053
- "**Design and Synthesis of New DOTA Conjugated (+)-Biotin Dimers to Develop High Affinity in Vitro Tumor Pretargeting Based on MW-Tuned Avidin Oligomers**" A.Pratesi, M. Ginanneschi, F.Melani,M. Chinol, A.Carollo, G. Paganelli, M.Lumini, M.Bartoli, M. Frediani, L.Rosi, G.Petrucci, L.Messori, A.M.Papini, Organic & biomolecular chemistry, *13*, **2015**, 3988-4001 **DOI:** 10.1039/C4OB02685C
- "**An easily recoverable and recyclable homogeneous polyester-based Pd catalytic system for the hydrogenation of α,β-unsaturated carbonyl compounds**" M. Bartoli, L. Rosi, G. Petrucci, W. Oberhauser, M. Frediani, O. Piccolo, V.D. Rathod, S. Paganelli, Catalysis communications, *69*, **2015**, 228-233 **DOI:** /j.catcom.2015.07.002
- "**A simple protocol for quantitative analysis of bio-oils through gas-chromatography/mass spectrometry**" M.Bartoli, L.Rosi, M. Frediani, M.Frediani, European Journal of Mass Spectroscopy, *20* (1), **2016**, 1-14 **DOI:** 10.1255/ejms.1432
- "**Palladium nanoparticles supported onto stereocomplexed poly (lactic acid)-poly (ε-caprolactone) copolymers for selective partial hydrogenation of phenylacetylene**" M.Frediani, W. Oberhauser, L.

Rosi, M. Bartoli, E. Passaglia, L. Capozzoli, Rendiconti dei Lincei, **2017**, 1-8 **DOI:** 10.1007/s12210-017-0600-8

- **"Microwave assisted pyrolysis crop residues of Vitis vinefera"** M.Bartoli, L.Rosi, A.Giovannelli, Maurizio Passaponti, P. Frediani, M.Frediani, Journal of Analytical and Applied Pyrolysis, available online from 10 January 2018, **DOI:** 10.1016/j.jaap.2017.12.018

Book chapters

- "**Pyridine and Bipyridine End-functionalized Polylactide: Synthesis and Catalytic Applications**" M.Frediani, W.Oberhauser, L.Rosi, E.Passaglia, D.Bandelli, M.Bartoli, G.Petrucci, in "Handbook of Composite from Renewable Materials", *vol.4* Wiley, 2017 ISBN 978-1-119-22376-4
- "**Palladium-based catalysts-supported onto end-functionalized poly(lactide) for C-C double and triple bond hydrogenation reactions**", M.Frediani, W.Oberhauser, L.Rosi, E.Passaglia, M.Bartoli, in "New Advances in Hydrogenation Processes - Fundamentals and Applications", InTech, 2016 ISBN 978-953-51-2870-0
- "**A friendly management of waste/contaminated polymeric materials from differentiated waste collection through microwave pyrolysis**"L. Rosi, M. Frediani1, A. Undri, M. Bartoli, Piero Frediani, NovaPublisher in "Municipal Solid Waste: Management Strategies " 2017 ISBN 978-1-53611-865-0
- "**Challenges and opportunities in the field of energy storage: supercapacitors and activated biochar**" M.Bartoli, L.Rosi, P. Frediani, M.Frediani, NovaPublisher in "Biochar for non soil application " 2018

Conference contributions

- **NANOTECH 2013** ("Poly(lactic acid)-Based Stereocomplexes as Recyclable Organic Support for Pd-Nanoparticles")
- **XVIII New trends in organic synthesis 2013**, ("PLA stereocomplex like support for nanostructured palladium catalysts : synthesis and catalysis applications")
- **PYRO 2014-20th International Symposium on Analytical & Applied Pyrolysis**, ("Microwave pyrolysis as tool for recycling waste/contaminated polystyrene")
- **XXV Conference of Italian Chemical Society, 2014**, ("Green catalytic hydrolysis of polycarbonate through microwave heating ")
- **XVIII National conference on catalysis**, **2015**, ("Nitrile Hydration to Amide in Water: Palladium-Based Nanoparticles versus Molecular catalyst")
- **XIX Conference of Italian Chemical Society-Industrial Chemistry division**, 2015("Microwave assisted pyrolysis of cellulose in a multimode batch oven")
- **17th International symposium on relations between homogeneous and heterogeneous catalysis 2015**, (" Pd-nanoparticles on end-functionalized poly (lactic acid)-based stereocomplexes: Selectivity in C=C bond hydrogenation reactions)
- **BioFuelNet symposium, 2015,** ("Jumbo MFR: continuous pyrolysis unit")
- **PYRO 2016-21th International Symposium on Analytical & Applied Pyrolysis, 2016** (" Production of biooils and biochar through microwave assisted pyrolysis of Arundo donax in a multi mode batch reactor","Acid treatment of Phragmites for sugar and sugar derivatives production")
- **5TH International Green processing engineering, 2016** ("Bio-oils from microwave assisted pyrolysis of cellulose using a multi mode batch reactor","Microwave assisted pyrolysis of kraft lignin at reduce pressure in a multimode oven","Microwave assisted pyrolysis of waste from short rotation coppice of poplar")
- **XIX Conference of Italian Chemical Society-Catalysis division, 2016**, (" Palladium-nanoparticles on end-functionalized poly(lactic acid)-based stereocomplexes for the chemoselective cinnamaldehyde hydrogenation: Effect of the end-group")
- **6th International symposium on energy from biomass and waste, 2016**, ("Microwave assisted pyrolysis of halogenated plastics recovered from waste computers")

- **EuropaCat 2017, 2017** (“Platinum nanoparticles onto pegylated poly(lactic acid) stereocomplex for highly selective hydrogenation of aromatic nitrocompounds to anilines”,“Pd-based catalysts supported onto PLA stereocomplexes: overview on synthesis,characterization and application in selective hydrogenation reactions”, “Water-soluble nanostructured palladium catalysts: synthesis, characterization and application for nitrile hydrolysis”)
- **Spark 2017, 2017**(” Biofuels from inedible fatty acids : the use of biosolids and the sulfur issue”)