



Manuel Imperato

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Via Campi 103, 41125, Modena, Italy

AFFILIATIONS

Affiliations

- Department of Physics, Informatics, and Mathematics, University of Modena and Reggio Emilia, 41125 Modena, Italy
- Department of Chemical and Geological Sciences, University of Modena and Reggio Emilia & INSTM, 41125 Modena, Italy

WORK EXPERIENCE

01/11/2020 – CURRENT – Modena, Italy

PHD STUDENT IN "PHYSICS AND NANOSCIENCES" – UNIVERSITY OF MODENA AND REGGIO EMILIA, DEPARTMENT OF PHYSICS, INFORMATICS AND MATEMATICS

- Project: Molecular qubits based on metal-organic paramagnets: design, properties and use as quantum detectors
- Supervisor: Prof. Andrea Cornia

01/11/2019 – 31/10/2020 – Modena, Italy

RESEARCH FELLOW – UNIVERSITY OF MODENA AND REGGIO EMILIA, DEPARTMENT OF CHEMICAL AND GEOLOGICAL SCIENCES

- Project: Enhancing performances and usability of Fuel Cells for clean energy production: novel CARbon based COMposed Materials for Bipolar Plates (CARCOM)
- Supervisor: Prof. Adele Mucci

2019 – 2022 – Modena, Italy

TEACHING ASSISTANT – UNIVERSITY OF MODENA AND REGGIO EMILIA, DEPARTMENT OF CHEMICAL AND GEOLOGICAL SCIENCES

- Higher Inorganic Chemistry Laboratory, laboratory teaching assistant (Master degree in Chemical Sciences, first year), 2022
- Organic Chemistry I and II, laboratory teaching assistant (Bachelor degree in Chemistry, first and second year), 2019 and 2021
- Organic Macromolecular Chemistry, laboratory teaching assistant (Master degree in Chemical Sciences, second year), 2021

EDUCATION AND TRAINING

10/2016 – 07/2019 – Modena, Italy

MASTER DEGREE IN CHEMICAL SCIENCES, 110/110 CUM LAUDE – University of Modena and Reggio Emilia, Department of Chemical and Geological Sciences

- Thesis title: Synthesis of polystyrene via ARGET-ATRP: study of protected ascorbic acid as reducing agent
- Supervisor: Prof. Francesca Parenti

EQF level 7

- Traineeship title: Design and Synthesis of Inhibitors of the DNA Repair Enzyme Alkyladenine Glycosylase (AAG) for use as Biological Tools and Drug Discovery Leads
- Supervisor: Dr. Daniel Whelligan

2010 – 2016 – Modena, Italy

BACHELOR DEGREE IN CHEMISTRY, 110/110 – University of Modena and Reggio Emilia, Department of Chemical and Geological Sciences

- Thesis title: Optimisation of the synthesis of dithienosiloles as conjugated polymers precursors
- Supervisor: Prof. Adele Mucci

EQF level 6

09/2005 – 07/2010 – Modena, Italy

SECONDARY SCHOOL DIPLOMA IN INDUSTRIAL CHEMISTRY, FINAL GRADE: 100/100 – "I.T.I.S." E. Fermi

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

Job-related Skills

- Great expertise of air-free syntheses, in controlled atmosphere, with exclusion of oxygen and water (in and outside glovebox)
- Good expertise in the characterization of organic and metal-organic compounds by spectroscopic methods (NMR, GPC, MPLC, ESI-MS, FT-IR/ATR, Uv-VIS-NIR)
- Good expertise in the preparation and characterization of carbon based composed materials

Digital Skills

- Good knowledge of office suite tools (Microsoft Office, Origin)
- Good knowledge of chemical editing software (ChemDraw, ChemSketch)
- Working knowledge of image editing software (Gimp)

Organizational/Managerial Skills

- Good organizational and managerial skills for independent and group work
- Good flexibility, adaptability and organizational autonomy

PUBLICATIONS

Scientific Papers

- F. Roncaglia, M. Romagnoli, S. Incudini, E. Santini, **M. Imperato**, L. Spinelli, A. di Bona, R. Biagi, A. Mucci: Graphite-epoxy composites for fuel-cell bipolar plates: wet vs dry mixing and role of the design of experiment in the optimization of molding parameters. *International Journal of Hydrogen Energy* 2021, 46, 4407-4416
- E. Mas Claret, B. Al Yahyaie, S. Chu, R.M. Elliott, **M. Imperato**, A. Lopez, L.B. Meira, B.J. Howlin, D.K. Whelligan: An aza-nucleoside, fragment-like inhibitor of the DNA repair enzyme alkyladenine glycosylase (AAG). *Bioorganic & Medicinal Chemistry* 2020, 28, 115507
- N. Braidì, M. Buffagni, F. Ghelfi, **M. Imperato**, A. Menabue, F. Parenti, A. Gennaro, A. A. Isse, E. Bedogni, L. Bonifaci, G. Cavalca, A. Ferrando, A. Longo, I. Morandini: Copper-catalysed "Activators Regenerated by Electron Transfer" "Atom Transfer Radical Polymerisation" of styrene from a bifunctional initiator in ethyl acetate/ethanol, using ascorbic acid/sodium carbonate as reducing system. *Macromolecular Research* 2020, 28, 751-761
- M. Caselli, D. Vanossi, M. Buffagni, **M. Imperato**, L. Pigani, A. Mucci, F. Parenti: Optoelectronic Properties of A- π -D- π -A Thiophene-Based Materials with a Dithienosilole Core: An Experimental and Theoretical Study. *ChemPlusChem* 2019, 84, 1314-1323

Posters and Oral Presentations

- **M. Imperato**, M. Boniburini, A. Nicolini, F. Santanni, R. Sessoli, L. Sorace, A. Cornia: Co²⁺ and VO²⁺ coordination complexes of a bis- β -diketonate ligand, 8th European Conference on Molecular Magnetism (ECMM 2022), 4-7 July 2022, Rennes (FR), *Book of Abstracts*, p. 150
- **M. Imperato**, M. Boniburini, A. Nicolini, F. Santanni, R. Sessoli, A. Cornia: Metal-organic paramagnets as molecular qubits: design and properties, 15th European School on Molecular Nanoscience (ESMolNa2022), 22-27 May 2022, Tordesillas, Valladolid (ES), *Book of Abstracts*, 25.12
- **M. Imperato**, M. Boniburini, A. Nicolini, F. Santanni, R. Sessoli, A. Cornia: Design of molecular qubits based on metal-organic paramagnets, PhD Winter School on Inorganic Materials, Synthesis, Modelling and Characterization (InoMat-2021), 15-18 December 2021, Bardonecchia, Turin (IT), *Book of Abstracts*, p. 40
- **M. Imperato**, M. Boniburini, A. Nicolini, A. Cornia: Design of molecular qubits based on metal-organic paramagnets, XX edition Merk Young Chemists' Symposium (MYCS2021), 22-24 November 2021, Rimini (IT), *Book of Abstracts*, p. 223
- F. Roncaglia, L. Spinelli, **M. Imperato**, R. Biagi, M. Romagnoli, A. Di Bona, A. Mucci: Development of Graphite-Epoxy Composites for Bipolar Plates in PEM Fuel Cells, POLYMERMEET2021 International meet on polymer science and composite materials, 1 November 2021, online, *Book of Abstracts*, p. 6
- F. Roncaglia, A. Di Bona, **M. Imperato**, R. Biagi, M. Romagnoli, A. Mucci: Effect of compression molding parameters on graphite/epoxy composite bipolar plates, XIX EMILIA ROMAGNA CHEMISTRY DAY, 6 December 2019, Modena (IT), *Book of Abstracts*, p. 61
- A. Zambon, M. Bassani, **M. Imperato**, M. Trevisan, F. Fabris: Benzocamphor derivatives as chiral auxiliaries, IV-China-Italy-Symposium-Organic-Chemistry (CISOC), 16-17 April 2019, Bologna (IT)
- M. Buffagni, M. Caselli, **M. Imperato**, A. Mucci, F. Parenti, L. Pigani, D. Vanossi, A. Zambon: Synthesis and characterisation of thiophene-based acceptor-donor-acceptor small molecules, XVIII EMILIA ROMAGNA CHEMISTRY DAY, 17 December 2018, Parma (IT), *Book of Abstracts*, p. 15

CONFERENCES AND SCHOOL

Conferences

- 8th European Conference on Molecular Magnetism (ECMM 2022), (poster contribution), 4-7 July 2022, Rennes (FR)
- XX Edition Merk Young Chemists' Symposium (MYCS2021), (poster contribution), 22-24 November 2021, Rimini (IT)
- XLIX Meeting of the Italian Crystallographic Association (AIC), 6-9 September 2021, University of Parma (IT), online
- 17th International Conference on Molecule Based Magnets (ICMM2021), 14-18 June 2021, University of Manchester (UK), online
- Rising Stars Symposium (affiliated with ICMM2021), 10-11 June 2021, University of Manchester (UK), online
- XIX Emilia Romagna Chemistry Day, 6 December 2019, University of Modena and Reggio Emilia, Modena (IT)
- Fuel Cell Day, 12 November 2019, University of Modena and Reggio Emilia, Modena (IT)
- Erasmus Traineeship Day, (oral presentation), 22 October 2019, University of Modena and Reggio Emilia, Modena (IT)
- XVIII Emilia Romagna Chemistry Day, 17 December 2018, University of Parma, Parma (IT)
- Erasmus Traineeship Day, (oral presentation), 15 November 2018, University of Modena and Reggio Emilia, Modena (IT)

School

- 15th European School on Molecular Nanoscience (ESMolNa2022) and 9th Workshop on 2D Materials (W2DM2022), (Oral Oresentation), 22-27 May 2022, Tordesillas, Valladolid (ES)
- Inorganic Materials, Synthesis, Modelling and Characterization (InoMat-2021), PhD Winter School, (Flash Oral Presentation), 15-18 December 2021, Bardonecchia, Turin (IT)
- Fundamentals of Crystallography: the theory behind the crystal structure solution, AIC International Crystallography School 2021 (AICS2021), 31 August - 4 September 2021, online

• THESIS CO-ADVISOR

Matteo Boniburini (Master Degree in Chemical Sciences, 110/110 cum laude, 13/12/2021)

- Title: Metal complexes of the first transition series as qubits: coordination of Co²⁺ and VO²⁺ ions by a bis- β -diketonate ligand
- Supervisor: Prof. Andrea Cornia

Antonio Lezza (Bachelor Degree in Chemistry, 105/110, 09/04/2021)

- Title: Study of graphite/polymer compounds for the construction of bipolar plates for hydrogen fuel cells
- Supervisor: Prof. Adele Mucci

Sara Martini (Master Degree in Engineering for Environmental Sustainability, 110/110 cum laude, 03/12/2020)

- Title: Optimisation of the properties of ultra-thin bipolar plates
- Supervisor: Prof. Marcello Romagnoli

• VOLUNTEERING

Volunteer at AVIS, AIDO and ADMO
