Personal information

Surname / First name	**Gelmetti, Ilario**
Address	Carrer Pere Martell, 13, 10°, 1^a 43001, Tarragona, Spain
Telephone	+34 675223010
Personal Email	iochesonome@gmail.com
Nationality	Italian
Date of birth	March 1988

Occupational field	**Laboratory technician; Data scientist; Materials chemist**

Education and Training

Dates	January 2015 – July 2019
Title of qualification awarded	**Philosophy Doctor.** Final evaluation *excellent cum laude*.
Thesis Title	Advanced Characterization and Modelling of Charge Transfer in Perovskite Solar Cells.
Supervisor	Prof. Emilio José Palomares Gil
Principal subjects	Laboratory synthesis of semiconductors; fabrication of hybrid perovskite solar cells using clean room, glovebox, spin coating, and thermal evaporation; characterization of solid bulk materials and thin films; optical and electrical characterization of complete devices; coding for physical modelling (Matlab), for data acquisition (Python), and for data analysis (R).
International Internship	Dr. Piers Barnes Group, Department of Physics, Imperial College London, UK.
Name and type of organization	Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain.

Dates	October 2007 – October 2013
Title of qualification awarded	**Diploma of Science Class.** Final evaluation *70/70*.
Principal subjects	Physics (mechanics, electrostatics and electrodynamics), mathematics (analysis, linear algebra and probability), quantum mechanics, NMR spectroscopy, polymeric materials.
Name and type of organization	Scuola Normale Superiore di Pisa, Italy.

Dates	September 2010 – October 2013
Title of qualification awarded	**Master Degree in Organic Chemistry.** Final evaluation *110/110 cum laude*.
Thesis Title	Synthesis and Characterization of Chiral Polythiophenes.
Thesis Supervisor	Dr. Silvia Destri; Prof. Lorenzo Di Bari
Thesis Laboratory	Institute for Macromolecular Studies - Consiglio Nazionale delle Ricerche, Milan
Principal courses subjects	Organic synthesis, two-dimensional NMR spectroscopy, polymer chemistry. . .
Name and type of organization	Department of Chemistry and Industrial Chemistry, University of Pisa, Italy.

Dates	September 2007 – July 2010
Title of qualification awarded	**Bachelor of Science in Chemistry.** Final evaluation *110/110 cum laude*.
Thesis Title	Synthesis of Conjugated Polymers and Quantum Dots for Photovoltaics Applications.
Thesis Supervisor	Dr. Valter Castelvetro
Principal subjects	Chemistry, physics, mathematics. . .
Name and type of organization	Department of Chemistry and Industrial Chemistry, University of Pisa, Italy.

Dates	September 2002 – June 2007
Title of qualification awarded	**Secondary school diploma.** Final evaluation *100/100*.
Principal subjects	Chemistry, environmental chemistry, environmental law, physics, microbiology, technical drawing. . .
Name and type of organization	ITIS G. Ferraris, Verona, Italy.

Awards

National Chemistry Olympiads Fourth position in ranking of category C, Italian national selections, 2007.

National Physics Olympiads Best experimental solution, Italian national selections, 2007.

National Mathematics Olympiads Honourable mention, Italian national selections, 2006.

Personal skills and competences

Mother tongue **Italian**

Self-assessment
European level[(*)]

	Understanding			Speaking			Writing	
	Listening		Reading		Spoken interaction		Spoken production		Writing

English	C1	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
Spanish	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	B2	Independent user
Catalan	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

[(*)]*Common European Framework of Reference (CEF) level*

Computer skills and competences Git version control (advanced); Linux system administration (advanced); cabled and wireless networks setup and administration (advanced); Gaussian for computational chemistry (base); LATEX markup (advanced); LibreOffice Writer, Calc and Impress (medium); GIMP and Inkscape drawing (medium); BASH scripting (medium); coding in Python (medium, e.g. development of PyPV acquisition data software), in R (advanced, e.g. development of data processing scripts), in Matlab (medium, e.g. contributions to Driftfusion), in Lua (medium, e.g. contributions to LibreMesh).

Driving license(s) Driving license class B.

Volunteering Operazione Mato Grosso (2004-2007), eigenLab Pisa (2009-2013), Manitese (2013), NinuxVerona (founder 2014), LibreMesh.org (developer and community manager 2013-present), TGNU Tarragona hacklab (co-founder 2016-2018).

Personal Interests Renewable energy sources, open source software, computer security, wireless community networks, activism, cycling, climbing, problem solving, board games design.

Publications

Destri, S.; Barba, L.; **Gelmetti, I.**; Di Bari, L.; Porzio, W. Inverse Chirality Probe in Poly(3-Alkylthiophene) Derivative. *Macromol. Chem. Phys.* **2015**, *216 (7)*, 801–807.

Gelmetti, I.; Cabau, L.; Montcada, N. F.; Palomares, E. Selective Organic Contacts for Methyl Ammonium Lead Iodide (MAPI) Perovskite Solar Cells: Influence of Layer Thickness on Carriers Extraction and Carriers Lifetime. *ACS Appl. Mater. Interfaces* **2017**, *9 (26)*, 21599–21605.

Moia, D.; **Gelmetti, I.**; et al. Ionic-to-Electronic Current Amplification in Hybrid Perovskite Solar Cells: Ionically Gated Transistor-Interface Circuit Model Explains Hysteresis and Impedance of Mixed Conducting Devices. *Energy Environ. Sci.* **2019**, *12 (4)*, 1296–1308.

Gelmetti, I.; Montcada, N.; et al. Energy Alignment and Recombination in Perovskite Solar Cells: Weighted Influence on the Open Circuit Voltage. *Energy Environ. Sci.* **2019**, *12 (4)*, 1309–1316.

References

Prof. **Emilio José Palomares Gil**

Organization Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain.

Contacts epalomares@iciq.es   +34 977 920 245

Dr. **Piers R. F. Barnes**

Organization Department of Physics, Imperial College London (ICL), London, UK.

Contacts piers.barnes@imperial.ac.uk