

PERSONAL INFORMATION

Francesco Amato

WORK EXPERIENCES
& EDUCATION

Feb. 2021-May 2021

Scientific collaboration agreement

Agricultural enterprise "Il Pucino"

Synthesis and characterization of Silver, Copper and Gold nanoparticles

Nov. 2017-Apr. 2021

PhD in Nanotechnology

University of Trieste (Department of Chemical and Pharmaceutical Sciences)

Thesis title: "Synthesis, characterization and applications of Carbon Nanodots"

Supervisor: Prof. Maurizio Prato

May 2016-Jan. 2017

Postgraduate scholarship

Mar. 2017-Aug. 2017

ATeN Center UniPa (Advanced Technologies Network Center)

Nanotechnology for the diagnostic of the cultural heritage: preparation and characterization of nanomaterials for Surface Enhanced Raman Scattering applications

Supervisor: Prof. Simonpietro Agnello

May 2015-Nov. 2015

Postgraduate scholarship

University of Palermo (Department of Physics and Chemistry) & Laviosa Minerals Srl

Design, synthesis and characterization of nanohybrid systems clay/surfactant

Supervisor: Prof. Maria Liria Turco Liveri

Feb. 2015-Apr. 2015

Postgraduate training

University of Palermo (STEBICEF Department)

Synthesis and characterization of Organoindium (III) complexes with dianionic and tetradentate Schiff bases

Supervisor: Prof. Giampaolo Barone

Nov. 2012-Dec. 2014

Master Degree in Chemistry

University of Palermo (Department of Physics and Chemistry)

Grade: 110/110 cum Laude

Thesis title: "Synthesis and characterization of triorganotin (IV) complexes of polydentate Schiff bases"

Supervisor: Dr. Michelangelo Scopelliti

Sept. 2008-Jan. 2013

Bachelor Degree in Chemistry

University of Palermo (STEBICEF Department)

Grade: 96/110

Thesis title: "Synthesis, characterization and interaction with DNA of [Fe^{III}](dipyrido[3,2-a:2',3'-c]phenazine)bis(glycinate)ClO₄"

Supervisor: Prof. Giampaolo Barone

Dec. 2011-Mar. 2012

Academic training in Mass Spectrometry

Centro Grandi Apparecchiature (CGA), Palermo

Sept. 2003-Jan. 2008

High School diploma - Chemical-Biological Technician

IISS "E. Ascione" Palermo

Grade: 97/100

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

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

Job-related skills

UV-Vis, AAS, circular dichroism, fluorescence, FT-IR, Raman and SERS spectroscopies

Mass spectrometry and thermogravimetric analysis

AFM and TEM microscopies

Synthesis and characterization of carbon-based nanomaterials

Synthesis and characterization of inorganic and organic nanoparticles

Solid-state synthesis

Computer skills

Knowledge of the following O.S.: Windows, Linux Based and MacOS

Knowledge of the following analysis programs: OriginLab, Scidavis, Magic Plot and Excel

ADDITIONAL INFORMATION

Publications

1. "Agarose-Based Fluorescent Waveguide with Embedded Silica Nanoparticle-Carbon Nanodot Hybrids for pH Sensing"
Francesco Amato, Marco César Prado Soares, Thiago Destri Cabral, Eric Fujiwara, Cristiano Monteiro de Barros Cordeiro, Alejandro Criado, Maurizio Prato, Julio Roberto Bartoli, *ACS Appl. Nano Mater.* **2021**, accepted.
2. "Mapping the Surface Groups of Amine-Rich Carbon Dots Enables Covalent Catalysis in Aqueous Media"
Giacomo Filippini, **Francesco Amato**, Cristian Rosso, Giulio Ragazzon, Alberto Vega-Peñaloza, Xavier Companyó, Luca Dell'Amico, Marcella Bonchio, Maurizio Prato, *Chem*, **2020**, 6, 3022-3037.
3. "Nitrogen-doped Carbon Nanodots/PMMA Nanocomposites for Solar Cells Applications"
Francesco Amato, Michele Cacioppo, Francesca Arcudi, Maurizio Prato, Melina Mituo, Elizabeth G. Fernandes, Marcelo N. P. Carreño, Inés Pereyra, Julio R. Bartoli, *Chem. Eng.*

Trans., **2019**, 74, 1105-1110.

4. "Luminescence Efficiency of Si/SiO₂ Nanoparticles Produced by Laser Ablation"
Marco Cannas, Pietro Camarda, Lavinia Vaccaro, **Francesco Amato**, Fabrizio Messina, Tiziana Fiore, Simonpietro Agnello, Franco Mario Gelardi, *Phys. Status Solidi A*, **2019**, 216, 1800565.
5. "Enhancing the luminescence efficiency of silicon-nanocrystals by interaction with H⁺ ions"
Marco Cannas, Pietro Camarda, Lavinia Vaccaro, **Francesco Amato**, Fabrizio Messina, Tiziana Fiore, Maria Li Vigni, *Phys. Chem. Chem. Phys.*, **2018**, 20, 10445-10449.
6. "Inkjet printing Ag nanoparticles for SERS hot spots"
Carmelo Micciché, Giuseppe Arrabito, **Francesco Amato**, Gianpiero Buscarino, Simonpietro Agnello, Bruno Pignataro, *Anal. Methods*, **2018**, 10, 3215-3223.
7. "Ag nanoparticles agargel nanocomposites for SERS detection of cultural heritage interest pigments"
Francesco Amato, Carmelo Micciché, Marco Cannas, Franco Maria Gelardi, Bruno Pignataro, Maria Li Vigni, Simonpietro Agnello, *Eur. Phys. J. Plus*, **2018**, 133, 74.

Participation to conferences, schools & workshops

1. Participation in the International School of Chemistry, September 01-06, 2020, Camerino, Italy.
2. "Synthesis, characterization and applications of Carbon Nanodots", Annual Workshop of the PhD program in Nanotechnology, January 22, 2020, Trieste, Italy. Oral presentation.
3. "Synthesis, characterization and optoelectronic applications of Silicon dioxide@Carbon Nanodots hybrids", **Francesco Amato**, Julio R. Bartoli and Maurizio Prato, 15th Brazilian Polymer Conference (CBPol), October 27-31, 2019, Bento Gonçalves-RS, Brasil. Co-author in the poster presentation.
4. "Synthesis and Applications of Nitrogen-Doped Carbon Dots with Blue Fluorescence", Marco Cèsar Soares, Julio R. Bartoli, **Francesco Amato**, Michele Cacioppo, Francesca Arcudi, Marcelo N. P. Carreño, Inès Pereyra, Erik Fujiwara, Carlos K. Suzuki, Maurizio Prato, XVIII Brazil MRS Meeting 2019, September 22-26, Balneário Camboriù, Brasil. Co-author in the poster presentation.
5. Participation in the School of Nanomedicine, October 11-13, 2019, Trieste, Italy.
6. "The Surface properties of Carbon Nanodots", **Francesco Amato**, Giulio Ragazzon, Maurizio Prato, Workshop on Low-Dimensional Materials, July 22-23, 2019, San Sebastián, Spain. Oral presentation.

7. Participation in the “Modena Award 2019” symposium, May 3, 2019, Padova, Italy.
8. “Carbon Nanodots-based hybrids for Oxygen Reduction Reaction”, **Francesco Amato et al.**, E-WISPOC, January 29-February 1, 2019, Bressanone, Italy. Poster presentation.
9. “Synthesis, characterization and applications of Carbon Nanodots”, Annual workshop of the PhD program in Nanotechnology, January 22, 2019, Trieste, Italy. Oral presentation.
10. Participation in the “XXII International conference on Organic Synthesis”, September 16-21, 2018, Florence, Italy.
11. Workshop on analytical data and limit values in Chemistry, October 20, 2010, Palermo, Italy.

Academic training

Course on Transmission Electron Microscopy analysis (TEM) at the department of Life Sciences, University of Trieste, 30 hours.

Tutoring activity

1. Chimica Generale con laboratorio ed elementi di Organica, corso di laurea triennale in Geologia, 35 hours.
2. Chimica Organica Avanzata, corso di laurea in CTF, 2 hours.

I authorize the use of my personal data in compliance with Legislative Decree 196/03.