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Giulia Infurna

Date of birth: 18 Mar 1992 | **Place of birth:** Palermo, Italy | **Nationality:** Italian |

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Address: Viale delle Scienze, Ed. 6, 90128, Palermo, Italy (Work) |

Address: Via Alessandro Paternostro,10, 90133, Palermo, Italy (Home)

ABOUT ME

Highly analytical Chemical Engineer with extensive experience in the Research & Development of polymeric and composite materials. Expert in circular economy applications, including biomass-to-biochar conversion, polyolefin recycling, and the development of high-performance coatings (fire-retardant marine paints and cultural heritage protection). I combine a rigorous scientific approach—proven by the supervision of PhD and Master's research—with a strong track record in large-scale operational leadership.

As a Co-founder and Treasurer of a major social promotion association, I manage the technical and financial complexity of a festival attracting 50,000 attendees. I excel at bridging the gap between technical requirements (electrical/audio/lighting infrastructure) and human management, leading teams of over 180 people under high-pressure conditions. My profile is defined by the ability to navigate complex interactions across economic, technical, and social domains with precision and resilience.

WORK EXPERIENCE

BORSISTA – UNIVERSITÀ DEGLI STUDI DI PALERMO – 1 Apr 2025 – 31 Jan 2026 – PALERMO, ITALY

Recycled Polypropylene-based materials for AM applications
Spoke 6: Additive Manufacturing as a disruptive enabler of the Twin Transition
Recycled Polypropylene-based materials for AM applications

POST-DOC – UNIVERSITÀ DEGLI STUDI DI PALERMO – 2 May 2024 – 31 Mar 2025 – PALERMO, ITALY

- Cleaning treatments of PPE production scrap and waste by chemicals, heat and/or electrostatic treatments and analysis of degradation level undergone during treatments
- Recovery and performance testing of second-life materials, i.e. PP pellets, fibres and char particles though extrusions, cutting/electrochemical grinding and slow pyrolysis and selections for target applications
- Development and production of target manufacts, such as additive high-value 3D- filaments and products, films and nets, non-woven filaments and injection/blow-moulded manufacts
- Development and production of modified bitumen using second-life materials
- Life cycle and life costing assessments of application-drive approach

PHD – UNIVERSITÀ DEGLI STUDI DI PALERMO – 31 Oct 2020 – 19 Dec 2023 – PALERMO, ITALY

Employing of conventional processing for Formulation, characterization, and durability of multi-layer biofilms of recycled or bio-degradable polymers loaded with thermal treated forestal and agricultural waste as part of circular economy view.

BORSISTA – UNIVERSITA DEGLI STUDI DI PALERMO – Jun 2020 – 30 Oct 2020 – PALERMO, ITALY

Formulation, characterization and durability of intumescent paint in naval industry

INSTM - SCHOLARSHIP – CONSORZIO INTERUNIVERSITARIO NAZIONALE PER LA SCIENZA E TECNOLOGIA DEI MATERIALI – 31 May 2019 – 30 Dec 2019 – PALERMO, ITALY

Formulation (Solvent Casting & Compression Molding), Characterization (rheological, optical, uv-visible, mechanical, study oh photo-oxidation behaviour, permeability) and durability of biofilms for cultural heritage protection.

TRAINEESHIP – UNIVERSITADE DO MINHO – 31 Mar 2018 – 13 Jun 2018 – GUIMARAES, PORTUGAL

In-process characterization of polymer nanocomposites, by means of a prototype of Twin Screw Extruder with Double Slite Die for rheological assessment. Dispersion characterization, photo- and thermo-oxidation behaviour, electrical and thermal conductivity, scavenging role of nanoparticles.

CERTIFICATIONS

Polymers - MDPI

Guest Editor for Biomass Valorization and Conversion for Sustainable Polymer Composites

Link https://www.mdpi.com/si/247758

EDUCATION AND TRAINING

SEP 2016 – MAR 2019 Italy

MASTER'S DEGREE IN CHEMICAL ENGINEERING Università degli Studi di Palermo

Final grade 110 Cum Laude

SEP 2011 – OCT 2015 Italy

BACHELOR'S DEGREE IN CHEMICAL ENGINEERING Università degli Studi di Palermo

Final grade 101

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B1

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

SKILLS

Matlab | Origin | Trios | Microsoft Office | Microsoft Excel | Microsoft Powerpoint | LinkedIn | Microsoft Word | Spectrum

PUBLICATIONS

2026

Sustainable and efficient metal hydroxides as halogen-free flame-retardant additives in polyolefin-based composites for cable sheathing applications

Authors: Infurna,G. Albeggiani, C.; Battaglia, G.; Tirelli, D.; Campanelli, L.; Micale, G.; Dintcheva, Tz.N.. | **Journal Name**: Journal of Physics and Chemistry of Solids | **Volume, Issue and Pages**: 211 | **Publisher**: Elsevier Ltd

2026

Closing the Loop on Personal Protective Equipment: Collection, Polymer Recovery, and Circular Pathways for Post-Consumer PPE

Authors: Infurna G.;Levi M.; Incarnato L.; Dintcheva N.T. | **Journal Name**: Polymers | **Volume, Issue and Pages**: 18,3 | **Publisher**: MDPI

2026
Impact of Waste-HydroChar on the Rheological Behavior, Physical Properties, and Aging Resistance of Bitumen

Authors: Dintcheva N.T. ; eresi R. ; Graziano F. ; Infurna G. ; Volpe M. ; Messineo, A.; Celauro, C. | **Journal Name**: Materials | **Volume, Issue and Pages**: 19,2 | **Publisher**: MDPI

2025
Recycling of PBS and PBS Bio-Composites Containing Organic By-Product Waste.

Authors: Dintcheva N. Tz., Infurna G., Scolaro C., Di Liberto E. A., Ltayef M., Visco A. | **Journal Name**: POLYMERS | **Volume, Issue and Pages**: vol. 17, 2577, ISSN: 2073-4360

2025
Durability and performance of sustainable composite films from aliphatic-aromatic polyester with biomass-derived carbon-based filler particles.

Authors: Dintcheva N. T., Infurna G., Messineo A., V olpe M. | **Journal Name**: POLYMER DEGRADATION AND STABILITY | **Volume, Issue and Pages**: vol. 234, 111224, ISSN: 0141-3910

2025
Recycling of personal protective equipment: Sanitisation, degradation and polymer blend formulations.

Authors: Infurna G., Romani A., Riccelli M. C., Levi M., Incarnato L., Dintcheva N. T. | **Journal Name**: POLYMER DEGRADATION AND STABILITY | **Volume, Issue and Pages**: vol. 234, 111249, ISSN: 0141-3910

2025
Understanding the Effects of Processing Conditions on the Properties and Durability of Poly(Butylene Succinate)

Authors: Di Liberto E.A. , Infurna G., Dintcheva N. Tz. | **Journal Name**: JOURNAL OF VINYL & ADDITIVE TECHNOLOGY | **Volume, Issue and Pages**: 1083-5601

2025
Performance and Durability of Biopolymer Blends Containing Modified Metal Oxide Particles

Authors: Infurna G., Scamporrino A.A., Morici E., Bruno E., Pecoraro G., Dintcheva N. Tz. | **Journal Name**: POLYMERS | **Volume, Issue and Pages**: 17(22), 3000

2024
Sustainable Composites from Waste Polypropylene Added with Thermoset Composite Waste or Recovered Carbon Fibres.

Authors: Zolfaghari E., Infurna G., Alessi S., Dispenza C., Dintcheva N. T. | **Journal Name**: POLYMERS | **Volume, Issue and Pages**: vol. 16, 2922, ISSN: 2073-4360

2024
Biochar from Digestate Pyrolysis as a Filler for Biopolymer Blends: Effect of Blend Composition.

Authors: Infurna G., Botta L., Ingargiola I., Maniscalco M., Caputo G., Dintcheva N. T. | **Journal Name**: JOURNAL OF POLYMERS AND THE ENVIRONMENT | **Volume, Issue and Pages**: vol. 32, p. 1921-1936, ISSN: 1572-8919,

2024
Production of High Energy-Dense Solid Biofuel and Biopolymer Filler via Hydrothermal Carbonization of Carob Fruit.

Authors: V olpe M., Infurna G., Dintcheva Nadka Tzankova, Messineo A. | **Journal Name**: CHEMICAL ENGINEERING TRANSACTIONS | **Volume, Issue and Pages**: vol. 109, p. 127-132, ISSN: 2283-9216

2023
Antimicrobial and antioxidant supramolecular ionic liquid gels from biopolymer mixtures.

Authors: Marullo S., Gallo G., Infurna G., Dintcheva N. T., D'Anna F. | **Journal Name**: GREEN CHEMISTRY | **Volume, Issue and Pages**: vol. 25, p. 3692-3704, ISSN: 1463-9262

2023

Sustainable Materials Containing Biochar Particles: A Review.

Authors: Infurna G., Caruso G., Dintcheva N. T. | **Journal Name**: POLYMERS | **Volume, Issue and Pages**: vol. 15, 343, ISSN: 2073-4360

2023

Polysaccharide-based supramolecular bicomponent eutectogels as sustainable antioxidant materials.

Authors: Marullo S., Petta F., Infurna G., Dintcheva N. T., D'Anna F. | **Journal Name**: GREEN CHEMISTRY | **Volume, Issue and Pages**: ol. 25, p. 4513-4527, ISSN: 1463-9262

2022

Effect of different processing techniques and presence of antioxidant on the chitosan film performance.

Authors: Infurna, G, Cavallaro, G, Lazzara, G, Milioto, S, Dintcheva, NT | **Journal Name**: JOURNAL OF VINYL & ADDITIVE TECHNOLOGY , | **Volume, Issue and Pages**: vol. 28, p. 343-351, ISSN: 1083-5601

2022

Biochar Particles Obtained from Agricultural Carob Waste as a Suitable Filler for Sustainable Biocomposite Formulations.

Authors: Infurna G., Botta L., Maniscalco M., Morici E., Caputo G., Marullo S., D'Anna F., Dintcheva N. T. | **Journal Name**: POLYMERS | **Volume, Issue and Pages**: vol. 14, 3075, ISSN: 2073-4360,

2022

Ecofriendly Biopolymer-Based Nanocomposite Films with Improved Photo-Oxidative Resistance.

Authors: Morici E., Infurna G., Dintcheva N. T. | **Journal Name**: MATERIALS | **Volume, Issue and Pages**: vol. 15, 5778, ISSN: 1996-1944

2022

Control of end- of-life oxygen-containing groups accumulation in biopolyesters through introduction of crosslinked polysaccharide particles

Authors: Dispenza C., Sabatino M. A., Infurna G., Dintcheva N. T. | **Journal Name**: POLYMER ENGINEERING AND SCIENCE | **Volume, Issue and Pages**: vol. 62, p. 426-436, ISSN: 0032-3888

2021

Boosting the methanolysis of polycarbonate by the synergy between ultrasound irradiation and task specific ionic liquids.

Authors: D'Anna F., Sbacchi M., Infurna G., Dintcheva N. T., Marullo S. | **Journal Name**: GREEN CHEMISTRY | **Volume, Issue and Pages**: vol. 23, p. 9957-9967, ISSN: 1463-9262

2021

Slow pyrolysis as a method for biochar production from carob waste: Process investigation and products' characterization

Authors: Maniscalco M., Infurna G., Caputo G., Botta L., Dintcheva N. (| **Journal Name**: ENERGIES | **Volume, Issue and Pages**: 4, 8457, ISSN: 1996-1073

2021

Understanding the effects of crosslinking and reinforcement agents on the performance and durability of biopolymer films for cultural heritage protection.

Authors: Infurna G., Cavallaro G., Lazzara G., Milioto S., Dintcheva N. T. | **Journal Name**: MOLECULES | **Volume, Issue and Pages**: ol. 26, 3468, ISSN: 1420-3049

2021

A review of bioplastics and their adoption in the circular economy

Authors: Di Bartolo A., Infurna G., Dintcheva N. T. | **Journal Name**: POLYMERS | **Volume, Issue and Pages**: vol. 13, 1229, ISSN: 2073- 4360

2021
End-of-life and waste management of disposable beverage cups.

Authors: Dintcheva, Nadka Tz, Infurna, Giulia, D'Anna, Francesca | **Journal Name**: SCIENCE OF THE TOTAL ENVIRONMENT | **Volume, Issue and Pages**: vol. 763, p. 1-7, ISSN: 0048-9697,

2020
Bionanocomposite films containing halloysite nanotubes and natural antioxidants with enhanced performance and durability as promising materials for cultural heritage protection.

Write here the description...

Authors: Infurna G., Cavallaro G., Lazzara G., Milioto S., Dintcheva N. T. | **Journal Name**: POLYMERS | **Volume, Issue and Pages**: vol. 12, p. 1-16, ISSN: 2073-4360 | **Publisher**: MDPI

2020
Taking advantage of the functional synergism between carbon nanotubes and graphene nanoplatelets to obtain polypropylene-based nanocomposites with enhanced oxidative resistance

Authors: Infurna G., Teixeira P. F., Dintcheva N. T., Hilliou L., La Mantia F. P., Covas J. A. | **Journal Name**: EUROPEAN POLYMER JOURNAL | **Volume, Issue and Pages**: vol. 133, p. 1-11, ISSN: 0014-3057

2020
Environmentally friendly eutectogels comprising l-amino acids and deep eutectic solvents: Efficient materials for wastewater treatment.

Authors: Marullo S., Meli A., Dintcheva N., Infurna G., Rizzo C., D'Anna F. | **Journal Name**: CHEMPLUSCHEM | **Volume, Issue and Pages**: vol. 85, p. 301-311, ISSN: 2192-6506

2020
Natural Compounds as Sustainable Additives for Biopolymers.

Authors: Dintcheva N. Tz., Infurna G., Baiamonte M., D'Anna F. | **Journal Name**: POLYMERS | **Volume, Issue and Pages**: vol. 12, p. 1-24, ISSN: 2073-4360

CONFERENCES AND SEMINARS

31 AUG 2025 – 3 SEP 2025 Ischia Porto, Napoli (ITALIA)
XVIII Convegno Nazionale Associazione Italiana di Ingegneria dei Materiali (AIMAT)

Polyolefine based composite for cable insulation containing metal hydroxide

22 JUN 2025 – 27 JUN 2025 Groningen, the Netherlands
European Polymer Congress 2025 EPF

Sanitisation and reprocessing of personal protective equipment after use: Recycling,manufacturing and degradation.

8 SEP 2024 – 11 SEP 2024 Napoli (Italia)
XXV Convegno nazionale Associazione Italiana Materiali (AIM)

Post-use personal protective equipment: recycling, degradation and manufacturing

1 SEP 2024 – 4 SEP 2024 Palermo (Italia)
11th MoDeSt Conference

Recycling of personal protection equipment: sanitisation, degradation and polymer blend formulations

23 JUN 2024 – 26 JUN 2024 Limassol, Cyprus
35th Polymer Degradation Discussion Group, PDDG

Durability of Biobased composites filled with thermally degraded biomass through hydrothermal carbonization and slow pyrolysis

28 MAY 2024 – 31 MAY 2024 Athens
Sustainable Composites from Waste Polypropylene and Recovered Carbon Fiber

Zolfaghari E., **Infurna G.**,Alessi S., Dispenza C., Dintcheva N. Tz.

3 SEP 2023 – 5 SEP 2023 Sofia (Bulgaria)
Polymers and Biopolymers for Suitable life and Application

PBAT:PLA blend composite containing biochar particles from organic fraction of municipal solid waste pyrolysis

28 MAY 2023 – 1 JUN 2023 CATANIA (Italy)
XVIII Convegno dell'Associazione Italiana di Ingegneria dei Materiali (AIMAT)

Biopolymers blend composites containing biochar particles from anaerobic urban waste digestate pyrolysis

11 SEP 2022 – 13 SEP 2022 Salina, Messina (ITALIA)
Polymers, Health and Sustainability

Suistanable PBAT-Biocomposites containg biocharparticlesobtained by agricultural waste

15 SEP 2021 – 18 SEP 2021 Sa Manifattura, Cagliari (ITALIA)
XVI Convegno Nazionale Associazione Italiana di Ingegneria dei Materiali (AIMAT) 2021

Biopolymer based composites containing biochar particles coming from pyrolyzed agriculture waste

31 AUG 2019 – 4 SEP 2019 33rd PDDG Conf., Malta
Durability Of Bio- Polymers Based Films For Cultural Heritage Conservation

Dintcheva N. Tz, Lazzara G., Cavallaro G., **Infurna G.**, La Mantia F. P., Millioto S.,

AUG 2019 Materials in The Next Decade, Favignana
Naturally Occurring Materials For Cultural Heritage Conservation

Dintcheva N. Tz., Lazzara G., Cavallaro G., **Infurna G.**, Francesco Paolo La Mantia,

20 JUN 2019 – 23 JUN 2019 XII INSTM CONFERENCE-XV AIMAT CONFERENCE, Ischia (NA)
Bio-Polymers Based Films Containing Naturally Occurring Fillers And Anti-Oxidants For Cultural Heritage Conservation:Formulation, Characterization And Durability

Dintcheva N. Tz, Lazzara G., Cavallaro G., **Infurna G.,** La Mantia F. P., Millioto S.

DRIVING LICENCE

Driving Licence: A2

Driving Licence: B