



UNIVERSITÀ DEGLI STUDI DI MILANO

DIPARTIMENTO DI CHIMICA



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Office hours by appointment

Curriculum Vitae (January 2024)

Current position

2023-today Associate Professor in Industrial Chemistry (CHIM/04) - Rtd – B, University of Milan, Department of Chemistry.

Previous positions

2019-2022 Assistant Professor in Industrial Chemistry (CHIM/04) - Rtd – B, University of Milan, Department of Chemistry.

2016-2019 Assistant Professor in Industrial Chemistry (CHIM/04) - Rtd – A, University of Milan, Department of Chemistry.

2015-2016 Post-doc fellow, University of Milan, Department of Chemistry, supervisor: Prof. E. Ranucci.

2011-2015 Post-doc fellow, Polytechnic of Turin, Department of Applied Science and Technology, supervisor: Prof. G. Malucelli.

2007-2011 Post-doc fellow, Polytechnic of Turin, Department of Materials Science and Chemical Engineering, supervisor: Prof. G. Camino.

2006-2007 Post-doc fellow, University of Genoa, Department of Chemistry and Industrial Chemistry, supervisor: Prof. S. Russo.

Education

2006 PhD in Science, Technology and Chemical Processes, University of Genoa. Dissertation on “*Synthesis, characterization, performances and application fields of nanocomposite systems*”, supervisor: Prof. S. Russo.

2002 Doctoral degree in Chemistry, University of Genoa. Dissertation on “*Immobilizzazione di proteine su polimeri iper-ramificati. Utilizzo di poliammidi aromatiche iper-ramificate come fase stazionaria per cromatografia a scambio ionico di proteine*”, supervisor: Prof. S. Russo.

Research interests

- Synthesis and characterization of **polymers with high thermal stability** and flame retardant properties.
- Chemical grafting of **synthesised polymers with desired properties** such as anti-bacterial, flame retardant and ion adsorption properties onto cellulosic substrates.
- Synthesis and characterization of **degradable polymers in water and soil**.
- Synthesis and characterization of **hydrogels** for removal of heavy metal ions.
- Synthesis and characterization of **biocompatible and biometric polymers**:
 - ✓ Chiral polymers with adhesion cellular properties
 - ✓ Bioactive, biodegradable and biocompatible polymers with antimalarial activity
 - ✓ Hydrogels as scaffolds for tissue engineering applications and in vitro cell culturing

Total number of research products: 137

Total number of citations: 7712

h-index: 51

Published refereed publications: 128

Book: 1

Published book chapters: 6

Presentations as invited speaker at international congresses: 10

Teaching expertise

- **Lecturer** for the course on Polymer Degradation and Stability, in the Master Course in Industrial Chemistry, University of Milan. AY 2022-2023, 2020-2021 and 2019-2020.
- **Lecturer** for the course on Materials Chemistry, in the Bachelor Course in Scienze e tecnologie per lo studio e la conservazione dei beni culturali e dei supporti della informazione, University of Milan. AY 2023-2024, 2022-2023, 2021-2022 and 2020-2021.
- **Lecturer** for the course on Macromolecular Chemistry, Laboratory module, in the Bachelor Course in Industrial Chemistry, University of Milan. AY 2023-2024, 2018-2019, 2017-2018 e 2016-2017.
- **Lecturer** for the course on Polymer Chemistry, in the Master Course in Industrial Chemistry, University of Milan. AY 2017-2018 e 2016-2017.
- **Lecturer** for the PhD course entitled "Polymers for the conservation of Cultural Heritage" in Chimica Industriale, University of Milan. AY 2020-2021.
- **Lecturer** for the PhD course entitled "Biopolymers and bioplastics" in Chimica Industriale, University of Milan. AY 2019-2020.
- **Lecturer** for the PhD course entitled "Synthesis, processing and physicochemical properties of nanocomposites" in Chimica Industriale, University of Milan. AY 2017-2018.

Funded grants in the past 5 years

Project title	Funding source	Period	Role
Poliammidoammine: una nuova classe di ritardanti di fiamma polimerici per tessuti cellulosici	Piano di sostegno alla ricerca, Linea 2, Azione A	2020-2021	Proponente
<i>L</i> -, <i>D</i> -, and <i>D,L</i> -Tryptophan-based polyamidoaminoacids	Piano di sostegno alla ricerca, 2018, Linea 2, Azione A	2018-2019	Principal Investigator
Biocompatible polyamidoamines for surface-confined flame retardancy of textiles	Piano Transition Grant 2015/2017 - Horizon 2020	2018-2019	Principal Investigator
Biomimetic water-soluble chiral polyamidoaminoacids for selective subcellular localization	Piano di sostegno alla ricerca, 2015/2017, Linea 2, Azione A	2017-2018	Principal Investigator

Recognition by peers

- **Editor** of Polymer Degradation and Stability edited by Elsevier (<https://www.journals.elsevier.com/polymer-degradation-and-stability/editorial-board>).
- **Member** of the Editorial Board of Journal of Fire Sciences edited by Sage Publication Ltd (<https://uk.sagepub.com/en-gb/eur/journal/journal-fire-sciences#editorial-board>).
- **Member** of the Editorial Board of Polymers edited by MDPI (<http://www.mdpi.com/journal/polymers/editors>).
- **Referee** for peer-reviewed Journals in the field of polymer science, polymers and polymeric materials exhibiting flame retardant properties (Fire and Materials, Carbohydrate Polymers, ACS Sustainable Chemistry & Engineering, ACS Applied Materials and Interfaces).

1. **Alongi J**, Aad R, Ferruti P, Ranucci E. Use of calcium chloride to enhance the efficacy of polyamidoamines as flame retardants for cotton. Enhancing the flame resistance of cotton by exploiting the interaction between calcium chloride and an aspartic acid-derived polyamidoamine. *Cellulose in press*
2. **Alongi J**, Aad R, Ferruti P, Ranucci E. Use of calcium chloride to enhance the efficacy of polyamidoamines as flame retardants for cotton. *Polymer Degradation and Stability* **2023**; 215:110428.
3. Beduini A, Albanese D, Carosio F, Manfredi A, Ranucci E, Ferruti P, **Alongi J**. On the Suitability of Phosphonate-Containing Polyamidoamines as Cotton Flame Retardants. *Polymers* **2023**; 15, 1869. DOI:10.3390/polym15081869.
4. Ferruti P, **Alongi J**, Barabani E, Manfredi A, Ranucci E. Silk/Polyamidoamine Membranes for Removing Chromium VI from Water. *Polymers* **2023**; 15, 1871. DOI:10.3390/polym15081871.
5. Pifferi V, Ferrari E, Manfredi A, Ferruti P, **Alongi J**, Ranucci E, Falciola L. Nanosponges by the oxo-Michael poly-addition of cyclodextrins as sorbents of water pollutants: the o-toluidine case. *Environmental Science and Pollution Research* **2023**; 30, 6592-6603. DOI:10.1007/s11356-022-22501-2.
6. Maggi F, Manfredi A, Carosio F, Maddalena L, **Alongi J**, Ferruti P, Ranucci E. Toughening Polyamidoamine Hydrogels through Covalent Grafting of Short Silk Fibers. *Molecules* **2022**; 27, 7808. DOI: 10.3390/molecules27227808
7. **Alongi J**, Costantini A, Ferruti P, Ranucci E. Evaluation of the eco-compatibility of polyamidoamines by means of seed germination test. *Polym. Degrad. Stab.* **2022**; 167, 109854. DOI:10.1016/j.polymdegradstab.2022.109854.
8. Treccani S, **Alongi J**, Manfredi A, Ferruti P, Cavalli R, Raffaini G, Ranucci E. L-Arginine-Derived Polyamidoamine Oligomers Bearing at Both Ends-Cyclodextrin Units as pH-Sensitive Curcumin Carriers. *Polymers* **2022**; 14, 3193.
9. Pifferi V, Ferrari E, Manfredi A, Ferruti P, **Alongi J**, Ranucci E, Falciola L. Nanosponges by the oxo-Michael poly-addition of cyclodextrins as sorbents of water pollutants: the o-toluidine case. *Environmental Science and Pollution Research* **2022**. DOI:10.1007/s11356-022-22501-2
10. Forte C, **Alongi J**, Beduini A, Borsacchi S, Calucci L, Carosio F, Ferruti P, Ranucci E. The thermo-oxidative behavior of cotton coated with an intumescent flame retardant glycine-derived polyamidoamine: a multi-technique study. *Polymers* **2021**, 13, 4382.
11. Beduini A, Ferruti P, Carosio F, Ranucci E, **Alongi J**. Polyamidoamines Derived from Natural α -Amino Acids as Effective Flame Retardants for Cotton. *Polymers* **2021**, 13, 3714.
12. Marcioni M, **Alongi J**, Ranucci R, Malinconico M, Laurienzo P, Ferruti P, Manfredi A. Semi-Crystalline Hydrophobic Polyamidoamines: A New Family of Technological Materials?. *Polymers* **2021**, 13, 1018.

Milan, 1 January 2024

Jenny Alongi

