Curriculum vitae

PERSONAL INFORMATION

Family name, First name: Tagliaro, Irene

Nationality: Italian
URL for website: https://www.linkedin.com/in/irene-tagliaro/

Researcher identifiers:

Scopus: 57205322945

ORCiD: 0000-0002-3146-5674

Web of Science: ABC-4053-2021

- **EDUCATION**

2019 Ph.D. in Nanotechnology and Material Science, University Milano Bicocca, Milan, Italy in collaboration with PIRELLI & C. SpA. Title of final dissertation: "Novel Colloidal Approach To Prepare Highly-Loaded Silica-Based Elastomeric Nanocomposites".

2015 M.Sc. in Chemical Science and Technologies, University Milano Bicocca, Milan, Italy.

2010 B.Sc. in Chemical Science and Technologies, University Milano Bicocca, Milan, Italy.

- **CURRENT POSITION**

2024-2027 Assistant Professor (RTDa) at University Milano-Bicocca, Milan, Italy

- **PREVIOUS POSITIONS**

2021 – 2024 Postdoctoral fellow at Surface Engineering and Fluid Interfaces Laboratory (SEFI Lab) (supervised by Prof. Carlo Antonini) and project manager of the ITN-MSC project Smart surface design for efficient ice protection and control (SURFICE) (University Milano-Bicocca, Milan, Italy).

2020 – 2021 Project manager for ApiTech Srl on Research & Development Activity for Small and Medium Enterprises.

- **EXPERIENCE ABROAD**

2018 (7 months) Internship at Department of Physics, Harvard University, MA, USA
2015 (6 months) ERASMUS+ at ICMCB (Institut de Chimie de la Matière Condensée de Bordeaux) CNRS, Bordeaux, France

- **PRICES, AWARDS & ACADEMIC MEMBERSHIP**

October 2023 Winner of the1st prize competition of "Falling Walls Lab Italy" 2023 (Title: Breaking the wall of Forever Chemicals)

2019-2020 Preparation and submission of 20 R&D projects in collaboration with small and medium enterprises to different funding Institutions, 15 of which were awarded with

successful funding raising of overall € 300.000. Out of these, two were built as multi-center projects integrating different SMEs, in which I acted as the project manager. (Most important projects funded: DIGI-COOP: collaboration of 4 SMEs (call PID 2019 Misura A from the Chamber of Commerce, Lecco), Integrated business management of a plastic manufacturing company (call Innovation Manager from the Ministry of Economic Development, Italy).

2016-2018 The Ph.D. project "Novel Colloidal Approach To Prepare Highly-Loaded Silica-Based Elastomeric Nanocomposites" was selected for being innovative in the field of circular economy and sustainability of raw materials achieving a grant of € 30.000, awarded by Knowledge and Innovation Community (KIC) European Institute of Innovation & Technology (EIT) Raw Materials labelled IDS-FunMat-INNO.

- **SCIENTIFIC PUBLICATIONS**

Tagliaro I., Mariani M., Akbari R., Contardi M., Summa M., Saliu F., Nisticò R., Antonini C., PFAS-free superhydrophobic chitosan coating for fabrics. Carbohydrate Polymers, 2024, **333**, 121981 https://doi.org/10.1016/j.carbpol.2024.121981.

Porpiglia N.M.$^{+}$, Tagliaro I.$^{+}$, Pellegrini B., Alessi A., Tagliaro F.*, Russo L., Cadamuro F., Musile G., Antonini C.*, Bertini S.*, Chitosan derivatives as dynamic coatings for transferrin glycoform separation in capillary electrophoresis. International Journal of Biological Macromolecules, 2024, **254**, 2, 127888. https://doi.org/10.1016/j.ijbiomac.2023.127888.

Tagliaro I.*, Musile G., Caricato P., Dorizzi R.M., Tagliaro F., Antonini C., Chitosan Film Sensor for Ammonia Detection in Microdiffusion Analytical Devices. Polymers, 2023, ***15***, 4238. https://doi.org/10.3390/polym15214238

Stendardo L., Gastaldo G., Budinger M., Pommier-Budinger V., Tagliaro I., Ibáñez-Ibáñez P. F., Antonini C.*, Reframing ice adhesion mechanisms on a solid surface. Applied Surface Science. 2023, **641**, 158462. https://doi.org/10.1016/j.apsusc.2023.158462.

Dimitriadis T., Stendardo L., Tagliaro I., Coclite A. M., Antonini C.*, Maitra T.*, Capillary-Driven Water Transport by Contrast Wettability-Based Durable Surfaces. ACS Applied Materials & Interfaces. 2023, 15, **22**, 27206–27213. https://doi.org/10.1021/acsami.3c03840

Petroni S., Tagliaro I., Antonini C., D'Arienzo M., Orsini S. F., Mano J. F., Brancato V., Borges V.*, Cipolla, L.* Chitosan-Based Biomaterials: Insights into Chemistry, Properties, Devices, and Their Biomedical Applications. Marine Drugs. 2023, 21, **3**, 147. https://doi.org/10.3390/md21030147

Tagliaro I.*, Seccia S., Pellegrini B., Bertini S., Antonini C.*, Chitosan-based coatings with tunable transparency and superhydrophobicity: A solvent-free and fluorine-free approach by stearoyl derivatization. Carbohydrate Polymers. 2022, **302**, 120424. https://doi.org/10.1016/j.carbpol.2022.120424

Tagliaro I., Cobani E., Carignani E, Conzatti L., D'Arienzo M., Giannini L., Martini F., Nardelli F., Scotti R., Stagnaro P., Tadiello L., Di Credico B.*, The self-assembly of sepiolite and silica fillers for advanced rubber materials: The role of collaborative filler network. Applied Clay Science. 2022, **218**, 106383. https://doi.org/10.1016/j.clay.2021.106383

Tagliaro I., Cerpelloni A., Nikiforidis V., Pillai R., & Antonini C. (2022). On the Development of Icephobic Surfaces: Bridging Experiments and Simulations. In The Surface Wettability Effect on Phase Change (pp. 235-

272). Springer [10.1007/978-3-030-82992-6_8].

Ladiè R., Cosentino C., Tagliaro I., Antonini C., Bianchini G., Bertini S.*, Supramolecular Structuring of Hyaluronan-Lactose-Modified Chitosan Matrix: Towards High-Performance Biopolymers with Excellent Biodegradation. Biomolecules. 2021, **11**, 389. https://doi.org/10.3390/biom11030389

Tagliaro I., Di Credico B., Moncho-Jordá A.*, Electrostatic depletion effects on the stability of colloidal dispersions of sepiolite and natural rubber latex. Journal of Colloid and Interface Science. 2020, **560**, 606–617. https://doi.org/10.1016/j.jcis.2019.10.083

Cobani E., Tagliaro I., Geppi M., Giannini L., Leclère P., Martini F., Nguyen T.C., Lazzaroni R., Scotti R., Tadiello L., Di Credico B.*, Hybrid Interface in Sepiolite Rubber Nanocomposites: Role of Self-Assembled Nanostructure in Controlling Dissipative Phenomena. Nanomaterials. 2019, **9**, 486. https://doi.org/10.3390/nano9040486

Di Credico B.*, Tagliaro I., Cobani E., Conzatti L., D'Arienzo M., Giannini L., Mascotto S., Scotti R., Stagnaro P., Tadiello L., A Green Approach for Preparing High-Loaded Sepiolite/Polymer Biocomposites. Nanomaterials. 2019, **9**, 46. https://doi.org/10.3390/nano9010046

[+] equal contribution

* corresponding authors

- **PATENTS**

Tadiello L., Cipolletti VR., Giannini L., Hanel T., Galimberti M., Scotti R., Di Credico B., Morazzoni F., D'Arienzo M., Tagliaro I., Elastomeric compositions comprising silicate fibers with needle-shaped morphology of nanometric size and tires for vehicles that comprise them, From PCT Int. Appl. (2018), WO 2018116125 A1 20180628

- **Oral presentations in conference proceedings**

Tagliaro I., Radice V., Nisticò R., Antonini C, (2024) Chitosan electrolyte hydrogel for low ice adhesion material. E-MRS (Strasbourg, France).

Tagliaro I., Mariani M., Akbari R., Contardi M., Saliu F., Nisticò R., Antonini C, (2024) Superhydrophobic textiles with a PFAS-free chitosan-based coating. E-MRS (Strasbourg, France).

Tagliaro I., Porpiglia N.M., Pellegrini B., Alessi A., Tagliaro F., Russo L., Cadamuro F., Musile G., Antonini C., Bertini S., (2023) Development of Chitosan Derivatives for Analytical Application in Capillary Electrophoresis. EPNOE (Graz, Austria).

Tagliaro I., Seccia S., Pellegrini B., Bertini S., Antonini C., (2023) Chitosan-based fluorine-fee superhydrophobic coatings. EUCHIS (Siglufjörður, Iceland).

Tagliaro I., Seccia S., Pellegrini B., Bertini S., Antonini C., (2022) Tunable transparency and superhydrophobicity of chitosan-based fluorine-free coatings. Contribution presented at: ISPAC (University Milano Bicocca) (Milan, Italy).

Tagliaro I., Di Credico B., (2018) Colloidal approach to prepare new elastomeric nanocomposites. Contribution presented at: Complex Fluids, Massachussets Institute of Technology (MIT) (Cambridge, (MA) United States).

Tagliaro I., Di Credico B., D'Arienzo, M. Giannini, L. (2018) Silica based nanofiller-latex composites for green tires compounds. Contribution presented at: Workshop CORIMAV, Pirelli (Milan, Italy).

- **TEACHING and INVITED LECTURES**

2023	Invited lecture at University of Granada "Material Design for Ice Protection and Control"
2019, 2021, 2022	Laboratory Assistant "Piano Lauree Scientifiche", for spreading interest in science among high school students.
2017, 2018	Laboratory Assistant in General and Inorganic Chemistry (B.Sc. in Materials Science)
2016	Laboratory Assistant in Inorganic Chemistry I (M.Sc. Science Chemistry and Technology)

- **IMPACT FACTOR**

H-index: 7 (Google Scholar)
Total number of citations: 155

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