

**PERSONAL INFORMATION**

Name: Claudio Cecone

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Date of birth: 13/06/1990

Nationality: Italian

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**ACADEMIC QUALIFICATIONS**

- PhD in Chemistry and Materials Science / University of Turin (Turin, Italy) / Thesis: “ $\beta$ -cyclodextrin based polyelectrolytes: versatile materials for innovative applications”
  - Master’s degree in industrial chemistry / University of Turin (Turin, Italy) / Thesis: “Ceramic nanofibers obtained via electrospinning from polymeric oxide precursors-containing solutions synthesis and characterization” (110/110 cum laude)
  - Bachelor’s degree in industrial chemistry / University of Turin (Turin, Italy) (102/110)
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**CAREER HISTORY**

- 02/2015 – 09/2015 Employee at Teknikabel S.p.A. / Volpiano (Italy) / Activity: R&D
- 10/2015 – 09/2018 PhD student in Chemical and Material Science / University of Turin (Italy) / Activity: Synthesis and characterization of novel polymers for pharmaceutical, medical, and environmental applications
- 03/2019 – 02/2023 Postdoctoral Fellow / University of Turin (Italy) / Activity: Synthesis and characterization of novel polymers for pharmaceutical, medical, and environmental applications
- 03/2023 – Present Researcher (RTD-A) / University of Turin (Italy)
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**PERIODS ABROAD**

- 06/2018 - 07/2018 DTU NANOTECH Department of Micro- and Nanotechnology, Technical University of Denmark (Copenhagen, Denmark) / Activity: Encapsulation and release study of model drugs in different dextrin-based polymers and subsequent application in hydrogels systems

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## SCIENTIFIC PUBLICATIONS (H-INDEX:10, CITATIONS:355)

1. S. Morandi, C. Cecone, G. Marchisio, P. Bracco, M. Zanetti, M. Manzoli, «Shedding light on precursor and thermal treatment effects on the nanostructure of electrospun TiO<sub>2</sub> fibers», *Nano-Structures and Nano-Objects*, 2016, 7, 49-55.
2. C. Cecone, F. Caldera, A. Anceschi, D. Scalarone, F. Trotta, P. Bracco, M. Zanetti, «One-step facile process to obtain insoluble polysaccharides fibrous mats from electrospinning of water-soluble PMDA/cyclodextrin polymer», *Journal of Applied Polymer Science*, 2018, 135, 46490.
3. C. Cecone, F. Caldera, F. Trotta, P. Bracco, M. Zanetti, «Controlled Release of DEET Loaded on Fibrous Mats from Electrospun PMDA/Cyclodextrin Polymer», *Molecules*, 2018, 23, 1694.
4. C. Cecone, M. Zanetti, A. Anceschi, F. Caldera, F. Trotta, and P. Bracco, «Microfibers of Microporous Carbon Obtained from the Pyrolysis of Electrospun  $\beta$ -Cyclodextrin/Pyromellitic Dianhydride Nanosponges», *Polymer Degradation and Stability*, 2019, 161, 277-282.
5. A. Hamedi, F. Caldera, F. Trotta, M. Zarandi, A. Rubin Pedrazzo, and C. Cecone, «Metal Organic Frameworks in Medicine», *Acta Scientific Pharmaceutical Sciences*, 2019, 3, 107-109.
6. N. K. Dhakar, F. Caldera, F. Bessone, C. Cecone, A. Rubin Pedrazzo, R. Cavalli, C. Dianzani, F. Trotta, «Evaluation of solubility enhancement, antioxidant activity, and cytotoxicity studies of kynurenic acid loaded cyclodextrin nanosponge», *Carbohydrate Polymers*, 2019, 224, 115168.
7. A. Rubin Pedrazzo, A. Smarra, F. Caldera, G. Musso, N. K. Dhakar, C. Cecone, A. Hamedi, I. Corsi and F. Trotta, «Eco-Friendly  $\beta$ -cyclodextrin and Linecaps Polymers for the Removal of Heavy Metals», *Polymers*, 2019, 11, 1658.
8. A. Anceschi, M. Bertasa, F. Caldera, C. Cecone, F. Trotta, P. Bracco, M. Zanetti, M. Malandrino, P. E. Mallon, D. Scalarone, «New poly( $\beta$ -cyclodextrin)/poly(vinyl alcohol) electrospun sub-micrometric fibers for wastewater treatments», *Nanomaterials*, 2020, 10, 482.
9. I. Krabicová, S. Appleton, M. Tannous, G. Hoti, F. Caldera, A. Rubin Pedrazzo, C. Cecone, R. Cavalli and F. Trotta, «History of Cyclodextrin Nanosponges», *Polymers*, 2020, 12, 1122.
10. C. Cecone, G. Hoti, I. Krabicová, S. Appleton, F. Caldera, P. Bracco, M. Zanetti, F. Trotta, «Sustainable synthesis of cyclodextrin-based polymers exploiting natural deep eutectic solvents», *Green Chemistry*, 2020, 22, 5806.
11. J. López-Nicolás, A. Matencio, M. Guerrero-Rubio, F. Caldera, C. Cecone, F. Trotta, F. García-Carmona, «Lifespan extension in *Caenorhabditis elegans* by oxyresveratrol supplementation in hyper-branched cyclodextrin-based nanosponges», *International Journal of Pharmaceutics*, 2020, 589, 119862.
12. A. Matencio, F. Caldera, C. Cecone, José. López-Nicolás, F. Trotta, «Cyclic oligosaccharides as active drugs, an updated review», *Pharmaceutics*, 2020, 13, 281.
13. G. Hoti, F. Caldera, C. Cecone, A. Rubin Pedrazzo, A. Anceschi, S.L. Appleton, Y. Khazaei Monfared, F. Trotta, «Effect of the Cross-Linking Density on the Swelling and Rheological Behavior of Ester-Bridged  $\beta$ -Cyclodextrin Nanosponges», *Materials* 2021, 14, 478.
14. V. Rizzi, J. Gubitosa, R. Signorile, P. Fini, C. Cecone, A. Matencio, F. Trotta, P. Cosma, «Cyclodextrin Nanosponges as adsorbent material to remove hazardous pollutants from water: the case of Ciprofloxacin», *Chemical Engineering Journal*, 2021, 411, 128514.
15. C. Cecone, G. Costamagna, M. Ginepro, F. Trotta, «One-step sustainable synthesis of cationic dextrin-based high-swelling adsorbents», *RSC Advances*, 2021, 11, 7653 - 7662.

16. A. Rubin Pedrazzo, C. Cecone, S. Morandi, M. Manzoli, P. Bracco, M. Zanetti, «Nanosized SnO<sub>2</sub> prepared by electrospinning: influence of the polymer on both morphology and microstructure», *Polymers*, 2021, 13, 977.
17. C. Penna, S. Femminò, F. Caldera, A. Rubin Pedrazzo, C. Cecone, E. Alfi, S. Comità, T. Higashiyama, F. Trotta, P. Pagliaro, R. Cavalli, «Cyclic nigerosyl-nigerose as oxygen nanocarrier to protect cellular models from hypoxia/reoxygenation injury: implications from an in vitro model», *International Journal of Molecular Science*, 2021, 22, 4208.
18. G. Hoti, S. Appleton, I. Krabicová, A. Rubin Pedrazzo, C. Cecone, A. Matencio, F. Trotta, F. Caldera, «Strategies to develop cyclodextrin-based nanosponges for smart drug delivery», *Smart drug delivery*, IntechOpen, 2021.
19. A. Rubin Pedrazzo, C. Cecone, F. Trotta, M. Zanetti, «Mechanosynthesis of  $\beta$ -cyclodextrin polymers based on natural deep eutectic solvents», *ACS Sustainable Chem. Eng.*, 2021, 9, 44, 14881–14889.
20. C. Cecone, G. Hoti, M. Zanetti, F. Trotta, P. Bracco, «Sustainable production of curable maltodextrin-based electrospun microfibers», *RSC Advances*, 2022, 12, 762 - 771.
21. Y. Khazaei Monfared, M. Mahmoudian, C. Cecone, F. Caldera, P. Zakeri-Milani, A. Matencio, F. Trotta, «Stabilization and anticancer enhancing activity of the peptide nisin by cyclodextrin-based nanosponges against colon and breast cancer cells», *Polymers*, 2022, 14, 594.
22. G. Hoti, A. Matencio, A. Rubin Pedrazzo, C. Cecone, S. Appleton, Y. Khazaei Monfared, F. Caldera, F. Trotta, «Nutraceutical concepts and dextrin-based delivery systems», *International Journal of Molecular Science*, 2022, 23, 8.
23. S. Peimanfard, A. Zarrabi, F. Trotta, A. Matencio, C. Cecone, F. Caldera, «Developing novel hydroxypropyl- $\beta$ -cyclodextrin-based nanosponges as carriers for anticancer hydrophobic agents: overcoming limitations of host-guest complexes in a comparative evaluation», *Pharmaceutics*, 2022, 14, 5.
24. A. Fioravanti, S. Morandi, A. Rubin Pedrazzo, C. Cecone, M. Manzoli, M. Zanetti, P. Bracco, M. Mazzocchi, S. Lettieri, P. Marani, M. C. Carotta, «Investigation of the key parameters for gas sensing through comparison of electrospun and sol-gel semiconducting oxides», *Ceramics International*, 2022, 48, 14.
25. C. Cecone, G. Hoti, F. Caldera, M. Zanetti, F. Trotta, P. Bracco, «NADES-derived beta cyclodextrin-based polymers as sustainable precursors to produce sub-micrometric cross-linked mats and fibrous carbons», *Polymer Degradation and Stability*, 2022, 202, 110040.
26. R. Francese, C. Cecone, M. Costantino, G. Hoti, P. Bracco, D. Lembo, F. Trotta, «Identification of a  $\beta$ CD-Based Hyper-Branched Negatively Charged Polymer as HSV-2 and RSV Inhibitor», *International Journal of Molecular Science*, 2022, 23, 15.
27. A. Rubin Pedrazzo, A. Jouve, S. Morandi, M. Manzoli, C. Cecone, P. Bracco, M. Zanetti, «Cyclodextrins as templating agent in solvent-free kneading-based syntheses of Nanosized SnO<sub>2</sub> and ZnO», *ACS Sustainable Chemistry & Engineering*, 2022, 10, 37.
28. C. Cecone, G. Hoti, P. Bracco, F. Trotta, «Natural deep eutectic solvents (NADES) - Progress in polymer synthesis and pharmaceutical application», *Pharmaceutical sciences*, 2022, 28, 4.
29. Y. Khazaei Monfared, M. Mahmoudian, C. Cecone, F. Caldera, S. Haiaty, H. Reza Heidari, R. Rahbarghazi, A. Matencio, P. Zakeri-Milani, F. Trotta, «Hyper-branched cationic cyclodextrin polymers for improving plasmid transfection in 2D and 3D spheroid cells», *Pharmaceutics*, 2022, 14, 12.

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## CONFERENCE CONTRIBUTIONS

C. Cecone, M. Ginepro, F. Trotta, P. Bracco, "Removal of salicylic acid as an emerging pollutant from aqueous media exploiting dextrin-based polymers", V-International Summer School on Cyclodextrins, Ascea (Italy), September 4-7, 2022 (Poster and Short Communication).

G. Hoti, F. Caldera, C. Cecone, A. Rubin Pedrazzo, A. Matencio, Y. K. Monfared, and F. Trotta, "Synthesis of Dextrins-based Polymers Nanoparticles using Nano Spray Drying Technique as a Novel Approach", V-International Summer School on Cyclodextrins, Ascea (Italy), September 4-7, 2022 (Poster and Short Communication).

C. Cecone, G. Hoti, F. Caldera, M. Zanetti, F. Trotta, P. Bracco, "Sub-micrometric cross-linked mats and fibrous carbons produced from NADES-derived beta cyclodextrin-based polymers", 20th International Cyclodextrin Symposium, Giardini Naxos (Italy), June 13-17, 2022 (Oral).

C. Cecone, M. Iudici, M. Ginepro, F. Trotta, P. Bracco, "Dextrin-based polymers for the removal of salicylic acid as an emerging pollutant from aqueous media", Polymers 2022 Conference: New Trends in Polymer Science, Turin (Italy), May 25-27, 2022 (Poster).

G. Costamagna, C. Cecone, M. Ginepro, F. Trotta, "Innovative maltodextrin-based biopolymers for inorganic pollutants removal in water treatments", Polymers 2022 Conference: New Trends in Polymer Science, Turin (Italy), May 25-27, 2022 (Poster).

G. Hoti, F. Caldera, C. Cecone, A. Rubin Pedrazzo, A. Matencio, Y. K. Monfared, and F. Trotta, "Determination of the cross-linking density and monomer composition of cyclodextrin-based nanosponges: a multiple-method approach", Polymers 2022 Conference: New Trends in Polymer Science, Turin (Italy), May 25-27, 2022 (Poster).

C. Cecone, G. Hoti, F. Caldera, M. Zanetti, F. Trotta, P. Bracco, "Sub-micrometric cross-linked mats and fibrous carbons produced from NADES-derived beta cyclodextrin-based polymers", Polymers 2022 Conference: New Trends in Polymer Science, Turin (Italy), May 25-27, 2022 (Oral).

G. Hoti, F. Caldera, C. Cecone, A. Rubin Pedrazzo, A. Matencio, Y. K. Monfared, and F. Trotta, "Nano spray drying technique as a novel approach to synthesize dextrin-based polymers nanoparticles", 10th edition of the Franco-Italian days of Chemistry, JFIC2022, Toulon (France), April 26-27, 2022 (Poster)

C. Cecone, G. Hoti, F. Caldera, M. Zanetti, P. Bracco, F. Trotta, "Green synthesis of novel cyclodextrin-based polymers exploiting NADES", Green Chemistry Summer School, Venezia (Italy), 2020 (Poster)

A. Rezayat, F. Caldera, F. Trotta, C. Cecone, A. Rubin Pedrazzo, "Cyclodextrin nanosponge formulations for the treatment of COVID-19", Green Chemistry Summer School, Venezia (Italy), 2020 (Poster)

G. Hoti, F. Caldera, V. Brunella, F. Netti, C. Cecone, A. Rubin Pedrazzo, S. Appleton, N. Dhakar, Y. Monfared, A. Mauro, R. Cavalli, F. Trotta, "Synthesis and Characterization of New Molecularly Imprinted Polymers for Melatonin Delivery", Green Chemistry Summer School, Venezia (Italy), 2020 (Poster)

C. Cecone, G. Hoti, A. Rubin Pedrazzo, F. Caldera, M. Zanetti, P. Bracco, F. Trotta, "NADES as suitable reactive media for the synthesis of  $\beta$ -cyclodextrin based polymers", 6th European Cyclodextrin Conference, Santiago de Compostela (Spain), 2019 (Poster)

E. Giorgio, A. Brusco, E. Pozzi, M. Ferrero, C. Cecone, F. Caldera, M. Argenziano, D. Rossi, F. Trotta, R. Cavalli, "New cyclodextrin based cationic polymers as promising non-viral siRNA delivery system", 6th European Cyclodextrin Conference, Santiago de Compostela (Spain), 2019 (Oral)

D. Lembo, R. Francese, R. Cavalli, C. Cecone, F. Trotta, " $\beta$ -cyclodextrin based polyelectrolytes: suitable viral inhibitors", 6th European Cyclodextrin Conference, Santiago de Compostela (Spain), 2019 (Oral)

A. Rubin Pedrazzo, F. Caldera, C. Cecone, F. Trotta, "Mechanochemical synthesis of hyper-crosslinked Cyclodextrin Polymers", 6th European Cyclodextrin Conference, Santiago de Compostela (Spain), 2019 (Poster)

C. Cecone, F. Caldera, F. Trotta, A. Anceschi, P. Bracco, M. Zanetti, "Electrospun PMDA/cyclodextrin nanosponges as precursor for novel carbon materials", European Polymer Conference 2019, Como (Italy), 2019 (Oral)

C. Cecone, M. Zanetti, P. Bracco, F. Caldera, F. Trotta, "Fibrous mats from electrospun PMDA/cyclodextrin polymer as DEET controlled release system", European Polymer Conference 2019, Como (Italy), 2019 (Poster)

C. Cecone, F. Caldera, F. Trotta, A. Anceschi, P. Bracco, M. Zanetti, "Electrospinning of hyperbranched PMDA/ $\beta$ -cyclodextrin polymers", The 10th International Conference of Modification, Degradation and Stabilization of Polymers, Tokyo (Japan), 2018 (Oral)

C. Cecone, F. Caldera, A. Anceschi, F. Trotta, P. Bracco, M. Zanetti, "One-step facile process to obtain insoluble polysaccharides fibrous mats from electrospinning of water-soluble cyclodextrin polymers", 19<sup>th</sup> International Cyclodextrin Symposium, Tokyo (Japan), 2018 (Poster)

C. Cecone, F. Caldera, A. Anceschi, F. Trotta, P. Bracco, M. Zanetti, "Controlled release of DEET loaded on fibrous mats from electrospun PMDA/cyclodextrin polymer", Giornate Italo-Francesi di Chimica 2018, Genova (Italy), 2018 (Poster)

C. Cecone, F. Caldera, A. Anceschi, D. Scalarone, F. Trotta, P. Bracco, M. Zanetti, "Getting Insoluble polysaccharides fibrous mats from electrospun water-soluble cyclodextrin polymers through one-step facile process", Milan Polymer Days 2018, Milan (Italy) 2018 (Poster)

M. Argenziano, C. Lombardi, F. Caldera, C. Cecone, M. Tannous, C. Dianzani, F. Trotta, C. Prandi, R. Cavalli, "Glutathione responsive beta-cyclodextrin nanosponges for controlled delivery of strigolactone derivatives for cancer therapy", Milan Polymer Days 2018, Milan (Italy), 2018 (Poster)

C. Cecone, F. Caldera, A. Anceschi, D. Scalarone, F. Trotta, P. Bracco, M. Zanetti, "One-step facile process to obtain insoluble polysaccharides fibrous mats from electrospinning of water-soluble beta cyclodextrin based polymer", 5th European Cyclodextrin Conference, Lisbon (Portugal) 2017 (Poster)

F. Trotta, F. Caldera, M. Tannous, C. Cecone, A. Anceschi, M. Alidoost, S. Bodoardo, "Cyclodextrin-based nanosponges: a versatile class of cross-linked polymers", Milan Polymer Days 2017, Milan (Italy), 2017 (Oral)

A. Smarra, A. Rubin Pedrazzo, F. Caldera, C. Cecone, F. Trotta, "Dextrin-based nanosponges for the removal of metal contaminants in wastewaters", Milan Polymer Days, Milan (Italy), 2017 (Poster)

M. Argenziano, C. Lombardi, F. Caldera, C. Cecone, M. Tannous, C. Dianzani, F. Trotta, C. Prandi, R. Cavalli, "Glutathione responsive beta-cyclodextrin nanosponges for controlled delivery of strigolactone derivatives for cancer therapy", Milan Polymer Days 2017, Milan (Italy), 2017 (Poster)

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## TEACHING ACTIVITIES

- Graduate teaching assistant (416 hours) for *Laboratorio di Chimica e Tecnologia dei Polimeri con laboratorio (LT-SdM)* and *Laboratorio di Sintesi Organiche ed Inorganiche di Interesse industriale (LT-CTC)*, University of Turin, 2016 – 2023, Turin, Italy
- Co-supervisor of 15 master's theses
- Responsible for the course *Materiali Polimerici* (LM-CH, 32 hours), University of Turin, 2023, Turin, Italy

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## OTHER ACTIVITIES

- Obtained license to practice as chemist, University of Turin, 2015, Turin, Italy
- Reviewer for international journals, 2019 – Present: International Journal of Molecular Science (MDPI), Molecules (MDPI), Fibers (MDPI), Polymers (MDPI), Materials (MDPI), Processes (MDPI), Applied sciences (MDPI), ChemEngineering (MDPI), Sustainability (MDPI), C (MDPI)
- Third International Summer School on Cyclodextrins web designer, 2016, Asti, Italy
- Fifth International Summer School on Cyclodextrins organizing committee member and web master, 2022, Ascea, Italy
- Polymers 2022 New Trends in Polymer Science organizing committee member, 2022, Turin, Italy
- Partecipazione to Notte Europea delle Ricercatrici e dei Ricercatori 2022
- Member of Società Chimica Italiana
- Member of Associazione Italiana di Scienza e Tecnologie delle Macromolecole