

## CURRICULUM VITAE

Rocco Cancelliere

### PERSONAL INFORMATION

**Birthplace:** *Isernia, Italy*

**Date of Birth:** *01/09/1991*

**Nationality:** *Italian*

**Status:** *celibate*

**Gender:** *male*

**Race:** *white*

**Language skills:** Italian (native), English (fluent, B1 Certificate).



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### SUMMARY

Rocco Cancelliere is currently a Research Scientist at TERIN-DEC-ACEL Laboratory within the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA). In 2022, he defended his dissertation entitled "Development of Electrochemical Biosensors for Clinical and Food-Safety Control" for his PhD in Analytical Chemistry. He collaborated closely with Sana S.r.l in Frosinone, Italy, during this time, where he gained knowledge of the primary processes of the Food Industry and their quality assurance through testing and validation. He is the author of more than 30 articles (60% as first author) in international peer-reviewed journals and co-author of around 30 oral and poster presentations at national and international conferences. Throughout his brief scientific career, Rocco paid close attention to the production and integration of green micro and nanomaterials (i.e., Biochar) for the development of electrochemical Bio-Sensing methods (especially label-free lab-on-chip) for environmental pollution (air and water quality), therapeutic, and food-safety control (beer, ice cream, flours quality). During his time as a national and international visiting researcher in a variety of research groups, he discovered the value of good interpersonal and communication skills in teamwork and international projects: active listening, effective message delivery, empathy, and a proactive attitude. Expertise in developing standardised methods and measurement protocols, as well as applying automated data processing and artificial intelligence (i.e., deep learning approach, etc.) to solve electrochemical issues (i.e., peaks resolution, etc.). Curious, enthusiastic, and driven. Always seeking new stimulation and educational chances.

As of 04/03/2025, the reported citations for the most important scientific research databases are as follows:

Source Google Scholar: Citations = 450; H-index= 15.

(<https://scholar.google.com/citations?hl=it&user=9pJOU9IAAAAJ>).

Source Scopus: Citations = 405; H-index= 14.

(<https://www.scopus.com/authid/detail.uri?authorId=57203729089>).

22/03/2025

*Rocco Cancelliere*

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## RESEARCH VISION

My long-term ambition is to become a leading scientist in the development of next-generation (bio)sensing platforms, where artificial intelligence, quantum science, and advanced material technologies converge to redefine the limits of sensitivity, selectivity, and device autonomy. My research vision integrates bioengineering, chemistry, physics, and computer science to address critical challenges in bio-imaging, biosensing, and biophysics, with broad applications in healthcare, environmental monitoring, and energy systems.

Building upon my expertise in electrochemical biosensors and their integration into triboelectric nanogenerator systems, I aim to pioneer self-powered and ultra-sensitive biosensing platforms, capable of real-time monitoring of biomolecular interactions with minimal energy footprints. During my recent tenure at ENEA, I have expanded my skills in the characterisation of electrochemical systems, including lithium-ion battery components and recycling, employing techniques such as scanning electron microscopy (SEM), X-ray diffraction (XRD), Raman spectroscopy, thermogravimetric analysis (TGA), and ICP-OES. These experiences have provided me with a robust foundation in advanced measurement technologies, materials analysis, and device integration.

A transformative research objective will be to unravel the quantum and nanoscale mechanisms governing charge transfer between biomolecules and engineered interfaces, with implications for both sensing and energy harvesting. By leveraging tailored nanomaterials, AI-driven signal processing, and quantum-informed design, I envision the creation of a new class of bioengineering measurement tools, combining precision at the single-molecule level with real-world applicability.

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## EDUCATION

### **PhD in Chemical Sciences (R58), (March 2022)**

Department of Analytical Chemistry,  
University of Rome Tor Vergata, Italy

Supervisor: **Prof. Laura Micheli**

Topics: HPLC, Mass Spectroscopy, Gas Chromatography, Biosensors, Nanomaterials, Green Nano-Carbon, Screen-printed electrodes (SPE), Electrochemistry.

### **M.Sc. Chemical Sciences and Technologies (cum laude), (March 2018)**

Department of Analytical Chemistry,  
University of Rome Tor Vergata, Italy

Supervisor: **Prof. Laura Micheli**

Topics: UV-HPLC, Biosensors, screen printed electrodes-based sensors, scaffolds, SEM.

### **B.Sc. Chemical Sciences and Technologies, (December 2014)**

Department of Analytical Chemistry,  
University of Rome Tor Vergata, Italy

Supervisor: **Prof. Laura Micheli**

Topics: UV-HPLC, Biosensors, screen-printed electrode-based sensors, X-Ray, FTIR.

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## WORK EXPERIENCES

**Jul 2024-Jun 2026 Fixed-Term Research Scientist** at the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA, TERIN department), Italy. EU funding project title – The National Recovery and Resilience Plan (NRRP)-NEXT GENERATION EU, CUP:183C22001170006. Research focus: lithium batteries and materials within the portfolio of *renewable energy, hydrogen and sustainability*.

**Mar 2024-Jul 2024 Postdoctoral Research Associate in the team of Prof M.F. Craciun at the University of Exeter** (Engineering Department), UK. AKT Project with industrial partner WSR Medical Solutions Ltd, UK. Project title "Study to investigate the feasibility of using graphene in the manufacture of x-ray protective garments".

**Feb 2024-Jul 2025 Postdoctoral fellowship** in the team of Prof S. Orlanducci at the University of Roma Tor Vergata (Department of Chemical Science), Italy. Project title: "Environmental Sensing with Artificial Intelligence (AI)", funded by the Italian Ministry of University and Research MUR - PRIN\_2022 - SENS-AI (CUP: E53D23000830006).

**Nov 2023-Dec 2023 Visiting Researcher in the group of Prof S. Russo, University of Exeter** (Centre for Graphene Science, CEMPS) UK. Project: Horizon-2020 RISE-Marie Skłodowska-Curie project named "Terrasse", EU-grant agreement 823878. Research focus: development of innovative design of electrodes for wearable (Bio)sensors.

**Nov 2023-Jun 2024 Collaborator with the nature of independent, occasional, and temporary work** at the Research Consortium for Energy, Automation, and Electromagnetic Technology (C.R.E.A.T.E), Italy. Project: Terasse, grant agreement 823878. Research focus: development of innovative design of electrodes for (Bio)sensing purposes.

**Nov 2023 – Jan 2024 Postdoctoral fellowship** in the team of Prof. G. Giovinco at the University of Cassino (Department of Civil and Mechanical Engineering), Italy. Project Title: "Implementation of comfort models for indoor environments based on artificial intelligence (AI)".

**Apr 2023- Sep 2023 Postdoctoral fellowship** in the team of Prof. Laura Micheli at the University of Rome Tor Vergata (Department of Chemical Science), Italy. Project title: "Codex4D – Viaggio in 4D nel manoscritto", funded by REGIONE LAZIO Avviso pubblico Gruppi di Ricerca (CODEX4D n. A0375-2020-36688).

**Jun 2022 – Sep 2022 Visiting Researcher in the teams of Prof A. Porchetta (University of Rome) and Prof M. Lanio at the Center of Molecular Immunology (CIM), Cuba.** Project: Horizon-2020 RISE-Marie Skłodowska-Curie project named "Nano-OligoMed", EU-grant agreement 778133. Research focus: development of aptamers and DNA-based bioreceptors for innovative (Bio)sensors.

**Sep 2021-Mar 2023 Postdoctoral fellowship** in the team of Prof. Laura Micheli at the University of Rome Tor Vergata (Department of Chemical Science), Italy. Project title: "High-pressure sanitification of water for foodborne virus Removal (HPSWFOOD)", funded by REGIONE LAZIO Avviso pubblico Gruppi di Ricerca (GeCoWEB n. A0375-2020-36688). Research focus: development of label-free electrochemical immunosensors for environmental monitoring.

**Jan 2021-Aug 2021 Post-graduate Scholarship** in the team of Dr. Giuseppina Rea at the National Research Council (CNR, Crystallography Institute), Italy. Project title: "Functionalization of electrode surfaces for the realization of nanostructured biosensors suitable for the detection of pesticides, mycotoxins and heavy metals", funded by REGIONE LAZIO Avviso pubblico Gruppi di Ricerca (FACILE grant n. 85-2017-15256).

**Apr 2019-Aug 2020 Post-graduate fellowship** in the team of Prof. Giuseppe Palleschi and Prof Laura Micheli at the University of Rome Tor Vergata (Department of Chemical Science), Italy. Project title: "Development of new biosystems for the continuous monitoring of marine toxins", funded by EU Food Quality and Safety: Thematic priority 5 under the Focusing and Integrating Community Research programme 2002-2006 (Biocop, grant agreement 6988).

**Nov 2018-Dec 2018 Visiting Researcher in the team of Prof. Adama Sesay at Center for Measurement and Information Systems (CEMIS), Finland.** Project: "Intelligent Support System to Promote Healthy Nutrition Among Older People". Research focus: development of microfluidic systems for reliable electrochemical (Bio)sensors.

**Jul 2018-Oct 2018 Post-graduate fellowship** in the team of Prof. Giuseppe Palleschi and Prof Laura Micheli at the University of Rome Tor Vergata (Department of Chemical Science), Italy. Project title: "Development of a flow-through immunoassay system (FI-IA)", funded by EU Food Quality and Safety: Thematic priority 5 under the Focusing and Integrating Community Research programme 2002-2006 (Biocop, grant agreement 6988). Research focus: development of microfluidic systems for environmental monitoring.

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## TEACHING

**Academic Year 2020-21 and 2021-22 Teaching Courses on Drug Analysis I (CHIM/08)** as an expert in the field, Pharmacy Degree (classe LM-13), University of Rome Tor Vergata, Italy

**Academic Year 2022-23 and 2023-24 Teaching Courses on Drug Analysis I (CHIM/08) and Analytical Chemistry (CHIM/01)** as an expert in the field, Pharmacy Degree (class LM-13), University of Rome Tor Vergata, Italy.

**Academic Year 2020-21 Teaching Courses in Food Chemistry** entitled: "Tech & food: superior technician of innovative and eco-sustainable processes in the milling, pasta-making process, packaging and logistics sector". ITS-"D.E.Mo.S. Foundation", Italy.

**Academic Years from 2019 to 2024 Tutoring for Didactic Laboratories and Stoichiometry Exercise,** University of Rome Tor Vergata, Italy.

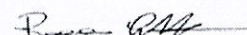
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## FUNDING

**To date, I have secured a total of 380.000€ in National and International funding, of which 268.000€ in individual fellowships.**

**National and International Projects**

22/03/2025



**Co-I, Named Researcher on the Innovate UK-Knowledge Transfer** project title "Study to investigate the feasibility of using graphene in the manufacture of x-ray protective garments". Grant value: **36000€**, PI: Prof. Monica Craciun, University of Exeter and WSR Medical Solutions Ltd.

**Co-I, Named Researcher as UNITOV unit in the POR FESR Lazio 2014-2020 frame. Axis, I Research and Innovation. Public Notice "Research Group Projects 2020: "Journey in 4D in the manuscript (CODEX4D)", n. A0375-2020-36688, funded by Lazio Innova ODR (Lazio Region), (member of the Tor Vergata research unit). Grant: 74500€, CODEX4D n. A0375-2020-36688, PI: Ugo Zammit, University of Rome Tor Vergata.**

#### **Fellowships**

**PI as Fixed-Term Research Scientist** (24 months). (ENEA) Italian National Agency for New Technologies, Energy and Sustainable Economic Development, TERIN-DEC-ACEL Laboratory, Italy  
Project: NEXT GENERATION EU, CUP:183C22001170006, Budget: **120000 €**

**PI as Postdoctoral Research Associate** (4 months). University of Exeter, UK. Project: The Innovate UK - Accelerated Knowledge Transfer (AKT). Budget: **21000 €**

**PI as Postdoctoral fellowship** (18 months). University of Rome Tor Vergata, Italy. Project: MUR - PRIN\_2022 - SENS-AI (CUP: E53D23000830006). Budget: **33400 €**

**PI as Visiting Researcher** (1 month). University of Exeter, UK. Project: Horizon-2020 RISE-Marie Skłodowska-Curie project named "Terrasse", grant agreement 823878. Budget: **2200 €**

**PI as Assignment of collaboration with the nature of independent, occasional, and temporary work** (3 months). C.R.E.A.T.E (Research Consortium for Energy, Automation, and Electromagnetic Technology). Budget: **1500 €**

**PI as Postdoctoral fellowship** (3 months). University of Cassino, Italy. Project: Implementation of comfort models for indoor environments based on AI. Budget: **5000 €**

**PI as Postdoctoral fellowship** (6 months). University of Rome Tor Vergata, Italy. Project: CODEX4D n. A0375-2020-36688. Budget: **12000 €**

**Reward contributions for early-stage researchers.** Regione Lazio, Italy. Project: PR FSE+ 2021-2027). Budget: **2000 €**

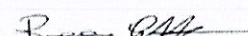
**PI as Visiting Researcher** (3 months). CIM (Center of Molecular Immunology), Cuba. Project: Horizon-2020 RISE-Marie Skłodowska-Curie project named "Nano-OligoMed", grant agreement 778133. Budget: **8000 €**

**PI as Postdoctoral fellowship** (12 months). University of Rome Tor Vergata, Italy. Project: GeCoWEB n. A0375-2020-36688. Budget: **19400 €**

**PI as Post-graduate fellowship** (8 months). National Research Council "CNR", Italy. Project: FACILE grant n. 85-2017-15256. Budget: **13000 €**

**PI as Teaching Courses ITS D.E.Mo.S** (3 months). ITS-"D.E.Mo.S. Foundation", Italy. Budget: **2000 €**

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**PI as Visiting Researcher** (1 month). Center for Measurement and Information Systems (CEMIS), Finland. Project: Intelligent Support System to Promote Healthy Nutrition Among Older People  
Budget: **3000 €**

**PI as Tutoring in Didactic Laboratories and Stoichiometry Exercises** University of Rome Tor Vergata, Italy (7 years). Budget: **2800 €** (400 per year)

**PI as Post-graduate fellowship** (12 months). University of Rome Tor Vergata, Italy. Project: European project "Biocop", Food Quality and Safety: Thematic priority 5 under the Focusing and Integrating Community Research programme 2002-2006, grant agreement 6988. Budget: **19400 €**

**PI as Post-graduate fellowship** (3 months). University of Rome Tor Vergata, Italy. Project: European project "Biocop, Food Quality and Safety: Thematic priority 5 under the Focusing and Integrating Community Research programme 2002-2006, grant agreement 6988. Budget: **5000 €**

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## PATENTS

US Patent n. 102020000031163 (17/12/2020)

Name: Device for analysing a biological fluid

Inventors: Signori Emanuela, Contini Giorgio, Micheli Laura, Di Lellis Andrea Maria, Tedeschi Yannick Maria, **Cancelliere Rocco**.

Concession Number: 18258141 (15/02/2024)

Italian Patent n. 102020000031163 (17/12/2020)

Name: DISPOSITIVO PER L'ANALISI DI UN FLUIDO BIOLOGICO

Inventors: **Cancelliere Rocco**, Contini Giorgio, Di Lellis Andrea Maria, Micheli Laura, Signori Emanuela, Tedeschi Yannick Maria.

Concession Number: 102020000031163 (03/01/2023)

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## AWARDS

1st Prize in the International competition "Heritage in Motion" with the Project "CODEX-4D: Viaggio in 4 dimensioni nel manoscritto", October 2024.

YOUNG RESEARCHERS AWARD, for presenting the oral entitled "BIOCHAR AS INNOVATIVE MATERIAL FOR DEVELOPMENT AN ELECTROCHEMICAL PLATFORM ". 9<sup>th</sup> International Conference on Chemistry and Euro Green Chemistry 2019, Roma (Italy), 22-23 May 2019.

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## MEMBERSHIPS

- Member of the **Italian Chemical Society – Division of Analytical Chemistry** Card n. 22832

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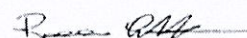
## PUBLICATIONS UNDER REVISION/IN PREPARATION

Source Google Scholar: Citations = 488; H-index = 15.

(<https://scholar.google.com/citations?hl=it&user=9pJOU9IAAAAJ>).

Source Scopus: Citations = 415; H-index = 14.

22/03/2025



(<https://www.scopus.com/authid/detail.uri?authorId=57203729089>).

\* = First author: equal contribution, <sup>c</sup> = Corresponding author

- I.E. Kovalska, J. Rouladge, **R. Cancelliere**, O. Lam, W. Bing, Z. S. Liaolipingvicky, A. Neves, S. Russo, L. Micheli, M.F. Craciun, Water-based spray-coated 2D materials heterostructures for multifunctional self-powered textile sensors, Nano-Micro Letters, NML-2025-18608 (to be resubmitted)
- F. Silveri, F. Della Pelle, C. Merola, A. Scroccarello, F. Trabucco, M. Amorena, E. Cozzoni, **R. Cancelliere**, L. Micheli, D. Compagnone, Algae-paper integrated sensor for bisphenol determination in Zebrafish embryos, Science of the Total Environment, STOTEN-D-25-03547R2 (under revision)
- E. Paialunga, **R. Cancelliere\***, A. Licheri, C. Micelli, A. Ceccarelli, G. Sarpi, D. Albano, B. Brugnoli, I. Francolini, L. Micheli, G. Rea, Multifunctional Potentiostat Integration for Static and Fluidic Electrochemical (Bio)sensing: The Case Study of Pseudomonas aeruginosa, Sensors and Actuators Reports, SNR-D-25-00347 (under revision).
- **R. Cancelliere**, M. Di Pea, A. Mancini, C. Marcatili Bevini, S. Brutti, A. Grassi, C. Bacco, E. Palmieri, A. Cataldo, P. Reale, P. P. Prosini, G.B. Appetecchi, L. Silvestri, Graphite Reuse from Different Spent Lithium-ion Batteries: Impact on the Structure-Performance Relationship, Journal of Power Sources, POWER-D-25-03672 (under revision).

#### PUBLICATIONS RECORDED

1. **R. Cancelliere\*<sup>c</sup>**, M. Molinara, A. Licheri, A. Maffucci, L. Micheli, Artificial intelligence-assisted electrochemical sensors for qualitative and semi-quantitative multiplexed analyses, Digital Discovery Journal (2025). <https://doi.org/10.1039/D4DD00318G>.
2. **R. Cancelliere\*<sup>c</sup>**, P. Mele, L. Bartolucci, S. Cordiner, W. Da Silva Freitas, C. Mazzuca, B. Mecheri, L. Micheli, V. Mulone, E. Paialunga, L. Severini, Mutual interaction of pyrolysis operating conditions and surface morphology for the electrochemical performance of biochar-modified screen-printed electrodes, Journal of Environmental Chemical Engineering (2025) 115477. <https://doi.org/10.1016/j.jece.2025.115477>.
3. L. Gatti, G. Sciutto, **R. Cancelliere**, L. Severini, C. Lisarelli, C. Mazzuca, S. Prati, R. Mazzeo, L. Micheli, Advanced label-free electrochemical immunosensor for a minimally invasive detection of proteins in paintings, Talanta (2024) 127167. <https://doi.org/10.1016/j.talanta.2024.127167>.
4. C. D'Agostino, **R. Cancelliere**, A. Ceccarelli, D. Moscone, L. Cozzi, G. La Rosa, E. Suffredini, L. Micheli, Evaluation of an Enzyme-Linked Magnetic Electrochemical Assay for Hepatitis a Virus Detection in Drinking and Vegetable Processing Water, Chemosensors 12 (2024) 188. <https://doi.org/10.3390/chemosensors12090188>.
5. A.L. Rivero-Hernández, Y.P. Hervis, M.E. Valdés-Tresanco, F.A. Escalona-Rodríguez, **R. Cancelliere**, E. Relova-Hernández, G. Romero-Hernández, E. Pérez-Rivera, Y. Torres-Palacios, P. Cartaya-Quintero, U. Ros, A. Porchetta, L. Micheli, L.E. Fernández, R. Laborde, C. Álvarez, S. Sagan, M.E. Lanio, I.F. Pazos Santos, Decoupling immunomodulatory properties from lipid binding in the  $\alpha$ -pore-forming toxin Sticholysin II, Int. J. Biol. Macromol. 280 (2024) 136244. <https://doi.org/10.1016/j.ijbiomac.2024.136244>.

6. **R. Cancelliere**<sup>c</sup>, E. Paialunga, A. Grattagliano, L. Micheli, Label-Free Electrochemical Immunosensors: A Practical Guide, *TrAC Trends Anal. Chem.* (2024) 117949. <https://doi.org/10.1016/j.trac.2024.117949>.
7. E. Palmieri, **R. Cancelliere** <sup>\*,c</sup>, F. Maita, L. Micheli, L. Maiolo, An ethyl cellulose novel biodegradable flexible substrate material for sustainable screen-printing, *RSC Adv.* 14 (2024) 18103–18108. <https://doi.org/10.1039/D4RA02993C>.
8. A. Qaisar, L. Bartolucci, **R. Cancelliere**, N.G. Chemmangattuvalappil, P. Mele, L. Micheli, E. Paialunga, Selective Phenolics Recovery from Aqueous Residues of Pyrolysis Oil through Computationally Designed Green Solvent, *Sustainability* 16 (2024) 7497. <https://doi.org/10.3390/su16177497>.
9. **R. Cancelliere**, T. Cosio, E. Campione, M. Corvino, M. P. D'Amico, L. Micheli, E. Signori, G. Contini, Label-free electrochemical immunosensor as a reliable point-of-care device for the detection of Interleukin-6 in serum samples from patients with psoriasis, *Front. Chem.* 11 (2023). <https://doi.org/10.3389/fchem.2023.1251360>.
10. **R. Cancelliere**<sup>c</sup>, G. Rea, L. Severini, L. Cerri, G. Leo, E. Paialunga, P. Mantegazza, C. Mazzuca, L. Micheli, Expanding the circularity of plastic and biochar materials by developing alternative low environmental footprint sensors, *Green Chem.* 25 (2023) 6774–6783. <https://doi.org/10.1039/D3GC01103H>.
11. **R. Cancelliere**<sup>c</sup>, G. Rea, L. Micheli, P. Mantegazza, E.M. Bauer, A. El Khouri, E. Tempesta, A. Altomare, D. Capelli, F. Capitelli, Electrochemical and Structural Characterization of Lanthanum-Doped Hydroxyapatite: A Promising Material for Sensing Applications, *Materials.* 16 (2023) 4522. <https://doi.org/10.3390/ma16134522>.
12. **R. Cancelliere**<sup>c</sup>, A. Di Tinno, A. Cataldo, S. Bellucci, S. Kumbhat, L. Micheli, Nafion-based Label-free immunosensor as a reliable warning system: the case of AFB1 detection in cattle feed, *Microchemical Journal* (2023) 108868. <https://doi.org/10.1016/j.microc.2023.108868>.
13. L. Severini, A. D'Andrea, M. Redi, S.B. Dabagov, V. Guglielmotti, D. Hampai, L. Micheli, **R. Cancelliere**, F. Domenici, C. Mazzuca, G. Paradossi, A. Palleschi, Ultrasound-Stimulated PVA Microbubbles as a Green and Handy Tool for the Cleaning of Cellulose-Based Materials, *Gels.* 9 (2023) 509. <https://doi.org/10.3390/gels9070509>.
14. R. D'Orsi, V.C. Canale, **R. Cancelliere**, O. Hassan Omar, C. Mazzuca, L. Micheli, A. Operamolla, Tailoring the Chemical Structure of Cellulose Nanocrystals by Amine Functionalization, *Eur J Org Chem.* (2023). <https://doi.org/10.1002/ejoc.202201457>.
15. M. Molinara, **R. Cancelliere**, A. Di Tinno, L. Ferrigno, M. Shuba, P. Kuzhir, A. Maffucci, L. Micheli, A Deep Learning Approach to Organic Pollutants Classification Using Voltammetry, *Sensors.* 22 (2022) 8032. <https://doi.org/10.3390/s22208032>.
16. **R. Cancelliere**, M. Cianciaruso, K. Carbone, L. Micheli, Biochar: A Sustainable Alternative in the Development of Electrochemical Printed Platforms, *Chemosensors.* 10 (2022) 344. <https://doi.org/10.3390/chemosensors10080344>.
17. **R. Cancelliere**, A. Di Tinno, A.M. Di Lellis, G. Contini, L. Micheli, E. Signori, Cost-effective and disposable label-free voltammetric immunosensor for sensitive detection of interleukin-6, *Biosensors and Bioelectronics.* 213 (2022) 114467. <https://doi.org/10.1016/j.bios.2022.114467>.
18. Di Tinno, **R. Cancelliere**<sup>\*</sup>, P. Mantegazza, A. Cataldo, A. Paddubskaya, L. Ferrigno, P. Kuzhir, S. Maksimenko, M. Shuba, A. Maffucci, S. Bellucci, L. Micheli, Sensitive Detection of Industrial Pollutants Using Modified Electrochemical Platforms, *Nanomaterials.* 12 (2022) 1779. <https://doi.org/10.3390/nano12101779>.
19. Majorani, C. Leoni, L. Micheli, **R. Cancelliere**, M. Famele, R. Lavalle, C. Ferranti, L. Palleschi, L. Fava, R. Draisci, S. D'Ilio, Monitoring of alcohol-based hand rubs in SARS-CoV-2 prevention by

- HS-GC/MS and electrochemical biosensor: A survey of commercial samples, *Journal of Pharmaceutical and Biomedical Analysis*. 214 (2022) 114694. <https://doi.org/10.1016/j.jpba.2022.114694>.
20. **R. Cancelliere**, A.D. Tinno, A. Cataldo, S. Bellucci, L. Micheli, Powerful Electron-Transfer Screen-Printed Platforms as Biosensing Tools: The Case of Uric Acid Biosensor, *Biosensors*. 12 (2021) 2. <https://doi.org/10.3390/bios12010002>.
  21. **R. Cancelliere**, D. Albano, B. Brugnoli, K. Buonasera, G. Leo, A. Margonelli, G. Rea, Electrochemical and morphological layer-by-layer characterization of electrode interfaces during a label-free impedimetric immunosensor build-up: The case of ochratoxin A, *Applied Surface Science*. 567 (2021) 150791. <https://doi.org/10.1016/j.apsusc.2021.150791>.
  22. Di Tinno, **R. Cancelliere\***, L. Micheli, Determination of Folic Acid Using Biosensors—A Short Review of Recent Progress, *Sensors*. 21 (2021) 3360. <https://doi.org/10.3390/s21103360>.
  23. L. Celio, M. Ottaviani, **R. Cancelliere\***, A. Di Tinno, P. Panjan, A.M. Sesay, L. Micheli, Microfluidic Flow Injection Immunoassay System for Algal Toxins Determination: A Case of Study, *Front. Chem.* 9 (2021) 626630. <https://doi.org/10.3389/fchem.2021.626630>.
  24. **R. Cancelliere**, A. Di Tinno, A.M. Di Lellis, Y. Tedeschi, S. Bellucci, K. Carbone, E. Signori, G. Contini, L. Micheli, An inverse-designed electrochemical platform for analytical applications, *Electrochemistry Communications*. 121 (2020) 106862. <https://doi.org/10.1016/j.elecom.2020.106862>.
  25. **R. Cancelliere**, F. Zurlo, L. Micheli, S. Melino, Vegetable waste scaffolds for 3D-stem cell proliferating systems and low cost biosensors, *Talanta*. 223 (2021) 121671. <https://doi.org/10.1016/j.talanta.2020.121671>.
  26. **R. Cancelliere**, K. Carbone, M. Pagano, I. Cacciotti, L. Micheli, Biochar from Brewers' Spent Grain: A Green and Low-Cost Smart Material to Modify Screen-Printed Electrodes, *Biosensors*. 9 (2019) 139. <https://doi.org/10.3390/bios9040139>.
  27. C. Mazzuca, M. Carbone, **R. Cancelliere**, S. Prati, G. Sciutto, R. Mazzeo, L. Tositti, R. Regazzi, D. Mostacci, L. Micheli, A new analytical approach to characterize the effect of  $\gamma$ -ray sterilization on wood, *Microchemical Journal*. 143 (2018) 493–502. <https://doi.org/10.1016/j.microc.2018.08.001>.

#### CONFERENCE PROCEEDINGS INDEXED WITH DOI

- 1) Francesco Pizzoli, Fabrizio Caroleo, Sara Nardis, Roberto Paolesse, Laura Micheli, **Rocco Cancelliere**, Corrado Di Natale and Larisa Lvova. Towards selective detection of “forever chemicals”: development of an opto-electrochemical sensor array for perfluorooctanoic acid (PFOA), in proceedings The International Symposium on Olfaction and Electronic Nose (ISOEN) 2024, Grapevine, TX, USA: pp. 1-3. <https://doi.org/10.1109/ISOEN61239.2024.10556>
- 2) R. Cancelliere, L. Severini, E. Kratter Thaler, C. Mazzuca, V. Guglielmi, P. Mussini, L. Micheli, Gellan gum hydrogels as such and ionic-liquid doped as modulable micro-invasive tools for cultural heritage studies, in: Proceedings of the 2022 IMEKO TC4 International Conference on Metrology for Archaeology and Cultural Heritage, IMEKO, Rome, Italy, 2023: pp. 414–418. <https://doi.org/10.21014/tc4-ARC-2023.079>.
- 3) M. Molinara, L. Ferrigno, A. Maffucci, P. Kuzhir, **R. Cancelliere**, A.D. Tinno, L. Micheli, M. Shuba, A Deep Transfer Learning Approach to an Effective Classification of Water Pollutants From Voltammetric Characterizations, in: 2022 IEEE 21st Mediterranean Electrotechnical Conference (MELECON), IEEE, Palermo, Italy, 2022: pp. 255–259. <https://doi.org/10.1109/MELECON53508.2022.9842896>.

- 4) A. Di Tinno, **R. Cancelliere**, A. Cataldo, S. Bellucci, L. Micheli, Nanomaterials-modified screen-printed electrodes: a powerful platform for sensor and biosensor set-up., in: Proceedings of The 1st International Electronic Conference on Biosensors, MDPI, Sciforum.net, 2020: p. 7144. <https://doi.org/10.3390/IECB2020-07144>.

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#### BOOK CHAPTER

- 1) **R. Cancelliere**, L. Micheli, E. Suffredini, S. Bellucci, G. Betta, L. Ferrigno, A. Maffucci, G. Miele, Coronavirus Label-Free Immunosensor: Preliminary Results, in: G. Di Francia, C. Di Natale (Eds.), Sensors and Microsystems, Springer Nature Switzerland, Cham, 2023: pp. 16–21. <https://doi.org/10.1007/978-3-031-25706-3>.

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#### TECHNICAL REPORTS

R. Cancelliere. "Fabbricazione di un immunosensore impedimetrico per la determinazione di ocratossina A", IC-RM 2021/05, protocol 0001582/2021.

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#### INVITED SPEAKER

**R. Cancelliere**. "Expanding circularity of plastic and biochar materials by developing alternative low environmental footprint sensors". NanoInnovation 2023, "Nano-Enabled Agriculture: Agroecosystems Sustainable Management", VIII Edition, Rome (Italy), 18 - 22 September 2023.

**R. Cancelliere**. "Results of voltammetry sensing", nell'ambito del progetto 2DSENSE project. 2d material-based low-cost sensor of aggressive substances nato science for peace and security program – Grant # SPS G5777 (2020 – 2022). Gaeta (Italy), July 2023.

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#### SCHOLARSHIPS and CERTIFICATIONS

TR (LC) - Troubleshooting HPLC and UHPLC, (November 2020)  
"Advanced guide to the prevention and solution of chromatographic and instrumental problems". Phenomenex, Italy  
Topics: HPLC, Empower Lab Management System, Agilent HPLC and UHPLC system.

LC1: "Pronti, partenza...HPLC!" (October 2018)  
Phenomenex-Castelmaggiore (BO), Italy  
Topics: HPLC, HPLC, Empower Lab Management System, Agilent HPLC and UHPLC system.

1<sup>st</sup> International EUROMBR Training Course "The European network for innovative microbioreactor applications in bioprocess development" (September 2018)  
Center of Pharmaceutical Engineering, TU Braunschweig, Germany  
Topics: Microfluidics, Microfluidic Systems

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#### CONTRIBUTIONS TO CONFERENCES

1. **R. Cancelliere**, C. Marcatili Bevini, M. D'Alù, A. Aurora, E. Serra, P. P. Prosini, L. Silvestri . Diverse Recycling Pathways for Advancing Sustainable Battery Technology. Lipari (Italy), June 2025 (Oral)

2. **R. Cancelliere**, C. Marcatili Bevini, M. D'Alù, A. Aurora, E. Serra, P. P. Prosini, L. Silvestri . Diverse Recycling Pathways for Advancing Sustainable Battery Technology. Lipari (Italy), June 2025 (Oral)
3. **R. Cancelliere**, L. Silvestri, M. Moreno. Battery Innovation Days (4th edition). Barcelona, Spain, 26-27 November 2024 (Roll-up, Project meeting).
4. **R. Cancelliere**, E. Palmieri, F. Maita, L. Micheli, L. Maiolo. "Novel biodegradable and flexible ethyl cellulose-based substrate material for sustainable screen-printing". Restate (Rethink Food Resources, Losses and Waste 2024), Heraklion, Greece, 25-27 September 2024 (Poster)
5. L. Migliore, A. Alabiso, A. Appolloni, R. Baciocchi, R. Braglia, **R. Cancelliere**, A. Canini, V. Cantelmo, R. Congestri, F. Costa, G. Costa, B. Ercolani, S. Frasca, N. M. Gusmerotti, C. Mazzuca, M. Meraviglia, L. Micheli, A. Nebuloni, M. Longo, L. Sablone, F. Scuderi, S. Tosi and S. Orlanducci. "Nanodiamonds From the Inside of Washing Machine: Upcycling of Textile Microfibers and Wastewater Bioremediation For Vegetable Production". Restate (Rethink Food Resources, Losses and Waste 2024), Heraklion, Greece, 25-27 September 2024 (Poster)
6. **R. Cancelliere**, L. Micheli. "Liposomes-based Biosensing: innovative electrochemical characterisation strategies for vesicle encapsulation, functionalisation, and sensing mechanisms". XXXI Congresso della Divisione della Chimica Analitica della Società Chimica Italiana, Milan (Italy), 27-30 August 2024. (Oral)
7. **R. Cancelliere**, E. Paialunga, B. Ercolani, L. Cozzi, E. Suffredini, T. Vicenza, L. Micheli. "Development of A Label-Free Immunosensor for The Detection of Norovirus In Water". Gruppo Sensori Workshop 2023, Rome (Italy), 13-15 December 2023. (Oral)
8. **R. Cancelliere**, L. Severini, E. Kratter Thaler, C. Mazzuca, V. Guglielmi, P. Mussini, L. Micheli. "Gellan gum hydrogels as such and ionic-liquid doped as modulable micro-invasive tools for Cultural Heritage studies". 2023 IMEKO International Conference on Metrology for Archaeology and Cultural Heritage, Rome (Italy), 19-21 October 2023. (Poster)
9. E. Paialunga, **R. Cancelliere**, L. Micheli. "Label-free immunosensor for the detection of pseudomonas aeruginosa in water samples". XXX Congresso della Divisione della Chimica Analitica della Società Chimica Italiana, Vasto (Italy), 17-21 September 2023. (Oral)
10. **R. Cancelliere**, E. Paialunga, L. Micheli. "Expanding circularity of plastic and biochar materials by developing alternative low environmental footprint sensors". XXX Congresso della Divisione della Chimica Analitica della Società Chimica Italiana, Vasto (Italy), 17-21 September 2023. (Oral)
11. A. Grattagliano, **R. Cancelliere**, L. Micheli. "Development of a label-free immunosensor for the detection of HAV in recycled waters". Society of Environmental, Toxicology and Chemistry Europe Annual Meeting 2023, Dublin (Ireland), 30 April -4 May 2023. (Oral)
12. **R. Cancelliere**, L. Micheli. "Robust analytical performances of a label-free electrochemical biosensor for the detection of Interleukin-6". Le Giornate di Bioanalitica 2023, Florence (Italy), 27-28 marzo 2023. (Oral)
13. **R. Cancelliere**, L. Micheli. "Powerful electron-transfer screen-printed platforms as bio-sensing tools for uric acid determination". 3<sup>th</sup> Autumn Meeting for Young Chemists in Biomedical Sciences, Napoli (Italy), 17-19 September 2022. (Oral)
14. **R. Cancelliere**, E. Signori, G. Contini, L. Micheli. "Biochar-based screen-printed electrodes as powerful immunosensing platforms for the selective detection of IL-6". The Tenth International Workshop On Biosensors, Dakhla (Morocco), 13 – 15 October 2022. (Orale)
15. **R. Cancelliere**, E. Suffredini, S. Bellucci, G. Betta, L. Ferrigno, A. Maffucci, G. Miele, L. Micheli. "Coronaviruses label-free immunosensor: preliminary results". IUBMB Advanced School and Workshop on "Proteins in Nanobiology and Nanobiotechnology", Havana (Cuba), 11-15 July 2022. (Poster)

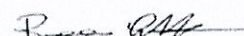
16. **R. Cancelliere**, E. Signori, G. Contini, L. Micheli. "A label-free electrochemical immunosensor for Covid-19 inflammatory markers: the case of Interleukin-6". 23rd International Conference on Biosensors and Bioelectronics, London (United Kingdom), 19-20 August 2021. (Web-Ex, Oral)
17. **R. Cancelliere**, L. Micheli. "A functionalized MWNTs-modified platform for a rapid and in situ detection of Uric Acid". Giornata Bioanalitica 2021, 13 July 2021. (piattaforma Web-Ex, flash-oral)
18. Di Tinno, **R. Cancelliere**, A. Cataldo, S. Bellucci, L. Micheli. "Nanomaterials-modified screen-printed electrodes: a powerful platform for sensor and biosensor set-up". The 1<sup>st</sup> International Electronic Conference on Biosensors, 2 November 2020. (Poster)
19. **R. Cancelliere**, A. Di Tinno, L. Micheli. "A label-free screen printed-based immunosensor for the detection of aflatoxin B1 in real matrix sample". Merck Young Chemists' Symposium 2019, organizzato dal Gruppo Giovani della Società Chimica Italiana (SCI), Rimini (Italy), 27 November 2019. (Oral)
20. **R. Cancelliere**, A. Di Tinno, L. Micheli. "Nanomaterials-modified screen-printed electrodes: a powerful platform for sensor and biosensor set-up". Nanoscience and Nanotechnology, Frascati (Italia), 15-18 October 2019. (Oral)
21. **R. Cancelliere**, L. Micheli, K. Carbone, I. Cacciotti, M. Pagano. "Development of biochar-based screen printed electrodes: toward a new material for electrochemical sensor". XXVIII Congresso della Divisione della Chimica Analitica della Società Chimica Italiana, Bari (Italy), 22-26 September 2019. (Poster)
22. **R. Cancelliere**. "Screen printed sensors for environmental monitoring: a case of study". 5th International Congress & Expo on Biotechnology and Bioengineering, London, (UK), 17-18 June 2019. (Oral)
23. **R. Cancelliere**, L. Micheli, K. Carbone, I. Cacciotti, M. Pagano. "Biochar as innovative material for development an electrochemical platform". 9th International Conference on Chemistry and Euro Green Chemistry, Rome (Italy), 22-23 May 2019. (Oral-Keynote)
24. **R. Cancelliere**, L. Micheli, K. Carbone, M. Pagano. "Development of biochar-based screen printed electrodes: toward a new material for electrochemical sensor". XXVI Congresso della Divisione della Chimica Analitica della Società Chimica Italiana, Bologna (Italy), 16-20 September 2018.
25. **R. Cancelliere**, C. Mazzuca, L. Micheli, M. Carbone, R. Lettieri, I. Bonacini, S. Prati, G. Sciutto, R. Mazzeo, L. Tositti, R. Regazzi, G. Ricci, D. Mostacci, A. Palleschi, G. Palleschi. "A sterilization process based on  $\gamma$  rays: the effect on woods". XXVI Congresso della Divisione della Chimica Analitica della Società Chimica Italiana, Giardini Naxos, Messina (Italy), 18-22 September 2016.
26. **R. Cancelliere**, C. Mazzuca, L. Micheli, M. Carbone, R. Lettieri, I. Bonacini, S. Prati, G. Sciutto, R. Mazzeo, L. Tositti, R. Regazzi, G. Ricci, D. Mostacci, A. Palleschi, G. Palleschi. "The effect on woods of a sterilization process based on  $\gamma$  rays". Euroanalysis 2015, Bordeaux (France), 6-10 September 2015.

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Il sottoscritto:

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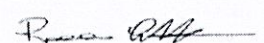
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