

# Curriculum Vitae

## Stefano Cinti

Assistant Professor in Analytical Chemistry  
University of Naples, Federico II-Dept. Pharmacy  
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### a) **EDUCATION** (*University of Rome "Tor Vergata"*):

AA 2014-2015: PhD in Chemical Sciences, Excellent Summa cum Laude. (Prof. Palleschi)  
AA 2010-2011: Master Degree in Chemistry, 110 Summa cum Laude. (Prof. Palleschi)  
AA 2008-2009: Bachelor Degree in Chemistry, 110 Summa cum Laude. (Dr. Monti)

### b) **FELLOWSHIPS:**

2020: Canon Foundation in Europe Research Grant (3600 euro).  
2019: Marie Skłodowska-Curie Actions Individual Fellowship, Funding scheme: MSCA-IF-EF-ST, Proposal number: 794007, Proposal acronym: SHINE (158000 euro).  
2018: Postdoctoral Fellowship - Fondazione Umberto Veronesi (27000 euro).  
2017: Postdoctoral Fellowship - Fondazione Umberto Veronesi (27000 euro).

### **HONORS:**

2019: Best Young researcher 2019 in Analytical Chemistry from the Analytical Division of Italian Chemical Society.  
2018: YERUN Research Mobility Award 2018-2019 (1000 Euro)  
2018: Best Young researcher 2018 in Bioanalytical Chemistry from the Bioanalytical Division of Italian Chemical Society.  
2018: Best Poster Award at Swiss Symposium in Point-of-Care Diagnostics 2018 (500 CHF).  
2018: FameLab 2018, L'Aquila - Winner of the local science communication competition designed to engage and entertain.  
2017: Winner of C Travel Award by "Journal of Carbon Research, MDPI" (800 CHF).  
2016: Best PhD thesis in Electrochemistry 2016 from Italian Chemical Society sponsored by "Fondazione De Nora" (1000 euro).  
2015: Third prize in "Chemistry and Light Contest" organized by ChemistryViews.org, with an essay titled "Chirality helps light to strike cancer".

### **ITALIAN NATIONAL SCIENTIFIC QUALIFICATION (ASN)**

2018: Area 03/A1, Associate Professor, Analytical Chemistry  
2018: Area 03/B2, Associate Professor, Fundamentals of Chemical Technologies

### **INSTITUTIONAL ROLES**

2020: Board-member of Junior Chamber International – Roma Capitolina. Vice president of the Internationalism section.  
2019-2021: Coordinator of the "Analytical Chemistry" – Young group of the Italian Chemical Society.  
2018-2020: Board-member of the "Diffusion of Chemical Culture" interdivisional group of the Italian Chemical Society.

### c) **TEACHING EXPERIENCE:**

10/2019-now: "Environmental Chemometrics and Toxicology Data (CHIM/01)" for Environmental Chemical Toxicology, University of Naples "Federico II".  
09/2015-01/2019: "General Chemistry (CHIM/07)" for Industrial and Civil Engineering bachelor degree courses, University of Rome "Niccolò Cusano".

### d) **CHRONOLOGY OF EMPLOYMENT AND RESEARCH EXPERIENCES**

04/2019-now: Assistant Professor in Analytical Chemistry at Department of Pharmacy, University of Naples "Federico II".  
01/2019-04/2019: EU-MSCA Fellow at Institut Català de Nanociència i Nanotecnologia at Autonomous University of Barcelona, Spain (Prof. Merkoci).  
01/2018-12/2018: Fondazione Umberto Veronesi Postdoc Fellow at University of Rome "Tor Vergata" (Prof. Palleschi).

02/2018: Visiting Postdoc at University of the West of England, Bristol, UK (Prof. Killard).  
06/2017: Visiting Postdoc at Chemnitz University of Technology, Chemnitz, Germany (Prof. Baumann).  
01/2017-12/2017: Fondazione Veronesi Postdoc Fellow at University of Rome "Tor Vergata" (Prof. Palleschi).  
06/2016-09/2016: Visiting Postdoc at University of California Santa Barbara, USA (Prof. Plaxco).  
01/2016-12/2016: Postdoc Fellow at University of Rome "Tor Vergata" (Prof. Moscone).  
06/2014-12/2014: Visiting PhD at University of California San Diego, USA (Prof. Wang).  
06/2013-12/2013: Visiting PhD at University of the West of England, Bristol, UK (Prof. Killard).  
04/2012-06/2012: Visiting Researcher at Oulu University of Applied Science, Finland (Dr. Nissinen).

#### **e) RESEARCH ACTIVITIES:**

My research interests include the development of electrochemical sensors, Paper-Based devices, Nanomotors, and Nanomaterials, applied to user-friendly analytical chemistry in the clinical, pharmaceutical, environmental, and agri-food sectors. I am author of 38 articles in peer-reviewed journals (28 as first-author and 17 as corresponding author), 5 chapters in books, and 2 proceedings, with an H-Index of 21. Some of my research activities have been focused on:

- Development of a hand-held electrochemical microfluidic paper-based analytical device that enables the rapid detection of breast cancer;
- Development and characterization of tattoo-sensor to detect bio-markers in sweat;
- Synthesis and characterization of nanomotors for the environmental detection/remediation;
- Point-of-care device for blood cholesterol detection and other disease-related biomarkers;
- Synthesis of nanomaterials (gold and carbon-based) to detect pollutants in water.

#### **List of papers:**

38. **S. Cinti (Corr. Author)**. Covid-19: Physical distancing will make science closer to citizen participation in decision making. *Substantia* 4 (2020) 1.
37. F. Arduini, **S. Cinti**, V. Mazzaracchio, V. Scognamiglio, A. Amine, D. Moscone, D. Carbon black as an outstanding and affordable nanomaterial for electrochemical (bio) sensor design. *Biosensors and Bioelectronics*, 156 (2020) 112033.
36. **S. Cinti (Corr. Author)**, G. Cinotti, C. Parolo, E.P. Nguyen, V. Caratelli, D. Moscone, F. Arduini, A. Merkoçi. Experimental Comparison in Sensing Breast Cancer Mutations by Signal ON and Signal OFF Paper-Based Electroanalytical Strips. *Analytical Chemistry* 92 (2020) 1674-1679.
35. **S. Cinti (Corr. Author)**. Chemistry as building block for a new knowledge and participation. *Substantia* 3 (2019) 25-27.
34. **S. Cinti (Corr. Author)**, D. Moscone, F. Arduini. Preparation of paper-based devices for reagentless electrochemical (bio)sensor strips. *Nature Protocols* (2019) DOI: 10.1038/s41596-019-0186
33. N. Bagheri, **S. Cinti (Corr. Author)**, V. Caratelli, R. Massoud, M. Saraji, D. Moscone, F. Arduini. A 96-well wax printed Prussian Blue paper for the visual determination of cholinesterase activity in human serum. *Biosensors and Bioelectronics* 134 (2019) 97-102.
32. M.R. Tomei, S. **Cinti (Corr. Author)**, N. Interino, V. Manovella, D. Moscone, F. Arduini. Paper-based electroanalytical strip for user-friendly blood glutathione detection. *Sensors and Actuators B: Chemical* (2019) DOI:10.1016/j.snb.2019.02.082.
31. **S. Cinti (Corr. Author)**. Novel paper-based electroanalytical tools for food surveillance. *Analytical and bioanalytical chemistry* (2019) DOI:10.1007/s00216-019-01640-5.
30. **S. Cinti (Corr. Author)**, E. Proietti, F. Casotto, D. Moscone, F. Arduini. Paper-Based Strips for the Electrochemical Detection of Single and Double Stranded DNA. *Analytical Chemistry* 90 (2018) 13680-13686.
29. F. Arduini, **S. Cinti**, V. Caratelli, L. Amendola, G. Palleschi, D. Moscone. Origami multiple paper-based electrochemical biosensors for pesticide detection. *Biosensors and Bioelectronics* 126 (2019) 346-354.
28. A. Amine, **S. Cinti**, F. Arduini, D. Moscone, G. Palleschi. How to extend range linearity in enzyme inhibition-based biosensing assays. *Talanta* 189 (2018) 365-369.
27. **S. Cinti**, F. Limosani, M. Scarselli, F. Arduini. Magnetic carbon spheres and their derivatives combined with printed electrochemical sensors. *Electrochimica Acta* 282 (2018) 247-254.
26. **S. Cinti (Corr. Author)**, V. Mazzaracchio, G. Öztürk, D. Moscone, F. Arduini. A Lab-on-a-tip approach to make electroanalysis user-friendly and de-centralized: detection of copper ions in river water. *Analytica Chimica Acta* 1029 (2018) 1-7.
25. **S. Cinti (Corr. Author)**, R. Cusenza, D. Moscone, F. Arduini. Paper-based synthesis of Prussian Blue Nanoparticles for the development of whole blood glucose electrochemical biosensor. *Talanta* 187 (2018) 59-64.
24. **S. Cinti**, N. Colozza, I. Cacciotti, D. Moscone, M. Polomoshnov, E. Sowade, R.R. Baumann, F. Arduini. Electroanalysis moves towards paper-based printed electronics: carbon black nanomodified inkjet-printed sensor for ascorbic acid detection as a case study. *Sensors and Actuators B: Chemical* 265 (2018) 155-160.

23. **S. Cinti (Co-corr. Author)**, L. Fiore, R. Massoud, C. Cortese, D. Moscone, G. Palleschi, F. Arduini. Low-cost and Reagent-free Paper-based Device to Detect Chloride Ions in Serum and Sweat. *Talanta* 179 (2018) 186-192.
22. **S. Cinti (Corr. Author)**. Polymeric Materials for Printed-Based Electroanalytical (Bio) Applications. *Chemosensors* 5 (2017) 31-46.
21. **S. Cinti (Co-corr. Author)**, V. Mazzaracchio, I. Cacciotti, D. Moscone, F. Arduini. Carbon Black-Modified Electrodes Screen-Printed onto Paper Towel, Waxed Paper and Parafilm M®. *Sensors* 17 (2017) 2267-2278.
20. **S. Cinti**, G. Volpe, S. Piermarini, E. Delibato, G. Palleschi. Electrochemical biosensors for rapid detection of foodborne Salmonella: a critical overview. *Sensors* 17 (2017) 1910-1931.
19. **S. Cinti (Co-corr. Author)**, B. De Lellis, D. Moscone, F. Arduini. Sustainable Monitoring of Zn(II) in Biological Fluids using Office Paper. *Sensors and Actuators B: Chemical* 253 (2017) 1199-1206.
- 20.
18. **S. Cinti (Co-corr. Author)**, M. Basso, D. Moscone, F. Arduini. A paper based-nanomodified electrochemical biosensor for ethanol detection in beers. *Analytica Chimica Acta* 960 (2017) 123-130.
17. F. Arduini, **S. Cinti**, V. Scognamiglio, D. Moscone, G. Palleschi. How cutting-edge technologies impact the design of electrochemical (bio)sensors for environmental analysis. *Analytica Chimica Acta* 959 (2017) 15-42.
16. **S. Cinti**, F. Arduini. Graphene-based screen-printed electrochemical (bio)sensors and their applications: efforts and criticisms. *Biosensors and Bioelectronics* 89 (2017) 107-122.
15. **S. Cinti (Co-corr. Author)**, C. Minotti, D. Moscone, G. Palleschi, F. Arduini. Fully integrated ready-to-use paper-based electrochemical biosensor to detect nerve agents. *Biosensors and Bioelectronics* 93 (2017) 46-51.
14. J. Kim, I. Jeerapan, S. Imani, T.N. Cho, A.J. Bhandodkar, **S. Cinti**, P.P. Mercier, J. Wang. Non-invasive alcohol monitoring using a wearable tattoo-based iontophoretic-biosensing system. *ACS Sensors* 1 (2016) 1011-1019.
13. F. Arduini, S. Cinti, V. Scognamiglio, D. Moscone. Nanomaterials in electrochemical biosensors for pesticide detection: advances and challenges in food analysis. *Microchimica Acta* 183 (2016), 2063-2083.
12. **S. Cinti**, D. Talarico, G. Palleschi, D. Moscone, F. Arduini. Novel reagentless paper-based screen-printed electrochemical sensor to detect phosphate. *Analytica Chimica Acta* 919 (2016) 78-84.
11. **S. Cinti**, F. Santella, D. Moscone, F. Arduini. Hg<sup>2+</sup> detection using a disposable and miniaturized screen-printed electrode modified with nanocomposite carbon black and gold nanoparticles. *Environmental Science and Pollution Research* 23 (2016) 8192-8199.
10. **S. Cinti**, D. Neagu, M. Carbone, I. Cacciotti, D. Moscone, F. Arduini. Novel carbon black-cobalt phthalocyanine nanocomposite as sensing platform to detect organophosphorus pollutants at screen-printed electrode. *Electrochimica Acta* 188 (2016) 574-581.
9. **S. Cinti**, F. Arduini, D. Moscone, G. Palleschi, L. Gonzalez-Macia, A.J. Killard. Cholesterol biosensor based on inkjet-printed Prussian blue nanoparticle-modified screen-printed electrodes. *Sensors and Actuators B: Chemical* 221 (2015) 187-190.
8. D. Talarico, **S. Cinti (Co-first author)**, F. Arduini, A. Amine, D. Moscone, G. Palleschi. Phosphate detection through cost-effective carbon black nanoparticle-modified screen-printed electrode embedded in a continuous flow system. *Environmental Science & Technology* 49 (2015) 7934-7939.
7. **S. Cinti**, F. Arduini, M. Carbone, L. Sansone, I. Cacciotti, D. Moscone, G. Palleschi. Screen-printed electrodes modified with carbon nanomaterials: a comparison among carbon black, carbon nanotubes and graphene. *Electroanalysis* 27 (2015) 2230-2238.
6. **S. Cinti**, G. Valdés-Ramírez, W. Gao, J. Li, G. Palleschi, J. Wang. Microengine-assisted electrochemical measurements at printable sensor strips. *Chemical Communications* 51 (2015) 8668-8671.
5. F. Arduini, C. Zanardi, **S. Cinti**, F. Terzi, D. Moscone, G. Palleschi, R. Seeber. Effective Electrochemical Sensor Based on Screen-Printed Electrodes Modified with a Nanostructured Carbon Black – Au Nanoparticles Composite. *Sensors and Actuators B: Chemical* 212 (2015) 536-543.
4. **S. Cinti**, F. Arduini, D. Moscone, G. Palleschi, A.J. Killard. Development of a Hydrogen Peroxide Sensor Based on Screen-Printed Electrodes Modified with Inkjet-Printed Prussian Blue Nanoparticles. *Sensors* 14 (2014) 14222-14234.
3. **S. Cinti**, F. Arduini, G. Vellucci, I. Cacciotti, F. Nanni, D. Moscone. Carbon Black assisted Tailoring of Prussian Blue Nanoparticles to Tune Sensitivity and Detection Limit towards H<sub>2</sub>O<sub>2</sub> by using Screen-Printed Electrode. *Electrochemistry Communications* 47 (2014) 63-66.
2. **S. Cinti**, S. Politi, D. Moscone, G. Palleschi, F. Arduini. Stripping Analysis of As(III) by Means of Screen-Printed Electrodes Modified with Gold Nanoparticles and Carbon Black Nanocomposite. *Electroanalysis* 26 (2014) 931-939.
1. K. Zelenka, T. Trnka, I. Tišlerová, D. Monti, **S. Cinti**, M. L. Naitana, L. Schiaffino, M. Venanzi, G. Laguzzi, L. Luvidi, G. Mancini, Z. Nováková, O. Šimák, Z. Wimmer, P. Drašar. Spectroscopic, Morphological, and Mechanistic Investigation of the Solvent-Promoted Aggregation of Porphyrins

Modified in meso-Positions by Glucosylated Steroids. Chemistry – A European Journal 17 (2011) 13743-13753.

**Participation to conferences:** I have been invited to present my research 10 times (7 nationals, 3 internationals), and I have participated as speaker to 25 conferences in various countries (16 nationals, 9 internationals).

**f) PUBLIC ENGAGEMENT**

**Radio:** Radio guest, Radio Cusano Campus 89.1 FM, “Ethic and Label” and “Culture and Kitchen”.

**Blog:** AbitareaRoma.net “Writing of educational essays regarding chemistry. Explanation of “everyday” phenomena from a chemical point of view”, Skuola.net “Providing tips to study and understand chemistry for high school and university students.”

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Stefano Cinti

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