

**STEFANO CINTI****POST-DOC RESEARCHER IN CHEMISTRY**

Born in Rome on 23th of July 1987

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Professional Experience

01/2017 – Currently

Postdoctoral researcher

Fondazione Umberto Veronesi, Department of Chemical Science and Technology, University of Rome "Tor Vergata", Via della Ricerca Scientifica 1, 00133 Rome, Italy.

<http://www.fondazioneveronesi.it/>

- Development of a hand-held electrochemical microfluidic paper-based analytical device that enables the rapid detection of breast cancer.

09/2015 - Currently

Lecturer

University of Rome "Niccolò Cusano", Via Don Carlo Gnocchi 3, 00166 Rome, Italy.

Professor of General Chemistry (SSD CHIM/03) for Industrial and Civil Engineering bachelor degree courses.

http://www.unicusano.it/images/pdf/CorsiLaurea/ingegneria/L7_chimica_generale_CINTI.pdf

- Organization of the course programme, slides lesson, exercises and examinations;
- Managing of an e-Learning web-platform to communicate with student and give to them assistance in solving General Chemistry related doubts.

06/2017

Visiting researcher

Department of Digital Printing and Imaging Technology, Baumann Printing Research, Chemnitz University of Technology, Reichenhainer Str. 70, 09120 Chemnitz, Germany.

Professor Reinhard R. Baumann

<http://bpr.mb.tu-chemnitz.de/ij-technikum/bpr.php>

- Optimization of the manufacturing processes to produce printed electrodes with inkjet printing;
- Use of different substrates to produce electrochemical sensors and biosensors for fully integration with interdigitated devices.

01/2016 – 12/2016

Postdoctoral researcher

Department of Chemical Science and Technology, University of Rome "Tor Vergata", Via della Ricerca Scientifica 1, 00133 Rome, Italy.

- Development and characterization of paper-based microfluidic platforms coupled to screen-printed electrodes to fabricate sensitive devices towards detection in environmental, food and clinical fields.

06/2016 – 09/2016

Visiting researcher

Department of Chemistry and Biochemistry, University of California Santa Barbara, Santa Barbara, CA 93106, USA.

Professor Kevin W. Plaxco

<https://labs.chem.ucsb.edu/plaxco/kevin/research/#kevinplaxco>

- Development of aptamer-based electrochemical biosensor to measure drugs and biomarkers in biological fluids in vivo.

06/2014 - 12/2014

Visiting Researcher

Department of Nanoengineering, University of California San Diego, La Jolla, CA 92093-0448, USA.

Distinguished Professor Joseph Wang

<http://joewang.ucsd.edu/>

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- Development and characterization of electrochemical sensor based on screen-printed electrodes to detect nerve agents;
- Production, development and characterization of tattoo-sensor to detect alcohol in sweat;
- Synthesis and characterization of nanomotors for the environmental remediation.

06/2014

Invited Visiting Scientist

SmarMatLab, Department of Chemistry, University of Milan, Via Golgi, 20133 Milan, Italy.

<http://users2.unimi.it/smartmatlab/wordpress/>

- Delivered to a group of *SmarMatLab* researchers a technical seminar concerning Dimatix Ink Jet printer setup, testing and operating protocols.

06/2013 - 12/2013

Visiting Researcher

Department of Biological, Biomedical and Analytical Sciences, Faculty of Health and Applied Sciences, University of the West of England, Frenchay Campus, Coldharbour Lane, Bristol BS16 1QY, UK.

Professor Anthony J. Killard

<http://www1.uwe.ac.uk/hls/bbas.aspx>

- Production, development and characterization of screen-printed electrodes modified with electrochemical mediators by means of inkjet printing technique to produce a point-of-care device for blood cholesterol detection, in the frame of SIMS European project (FP7/2007-2013).

04/2012 - 06/2012

Visiting Researcher

BioPrint Lab, Oulu University of Applied Science, 1, Kotkantie, 90250 Oulu, Finland.

Dr. Marja Nissinen

<http://www.oamk.fi/hankkeet/bioprint/>

- Production, development and characterization of screen-printed electrodes (SPEs) and Prussian Blue modified-SPEs to produce glucose biosensor embedded in a strip sensor.

04/2011 - 09/2011

Internship

BASF - The Chemical Company, Catalysts Division, Via di Salone 245, 00131 Rome, Italy.

- Analysis of water trace pollutants by-means of Atomic Absorption Spectroscopy (AAS) and Inductively Coupled Plasma-Mass Spectrometry (ICP-MS).
- Protocol optimization of ICP-MS towards heavy metals analysis.

Editorial and Divulcation Activities

01/2017 - Currently

Radio guest

Radio Cusano Campus 89.1 FM

<http://www.tag24.it/>

- Culture and Kitchen (*Cultura e Cucina*): the radio listeners are provided with scientific explanations and curiosities regarding the most used product that we can find in our kitchens;
- Ethic and Label (*Etica ed Etichetta*): commercial products' labels are analyzed and explained with the use of simple terms for non-specialist audience.

01/2017 - Currently

Freelance author

Unicusano Focus Sport&Ricerca (a weekly magazine distributed with Corriere dello Sport), Unicusano UP (a monthly magazine distributed with Corriere dello Sport)

<http://www.tag24.it/>

- Writing of articles regarding new scientific findings, with application to sport activities, industry, and research.

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07/2016 – Currently
Editorial Board Member

SM Analytical and Bioanalytical Techniques (SMABT)

<http://smjournals.com/analytical-bioanalytical-techniques/index.php>

- Distributing the calls for papers and assigning papers for reviewing for each Journal issue;
- Promoting SMABT in the areas of analytical chemistry;
- Organizing and handling special issues about electroanalytical chemistry.

06/2016 – Currently

Freelance author

AbitareaRoma.net

http://www.abitarearoma.net/argomenti/scienza-quotidiana/#.V_d7j5MtBPU

- Writing of educational essays regarding chemistry. Explanation of “everyday” phenomena from a chemical point of view.

Education

11/2012 – 01/2016

Department of Chemical Science and Technology, University of Rome “Tor Vergata”, Via della Ricerca Scientifica 1, 00133 Rome, Italy.

PhD in Chemical Sciences, cum laude.

- Thesis: *Nano/micromaterial-driven electroanalysis enhancement: facile approaches to improve (bio)sensing.*

Supervisor: Prof. Giuseppe Palleschi

09/2009 – 03/2012

Department of Chemical Science and Technology, University of Rome “Tor Vergata”, Via della Ricerca Scientifica 1, 00133 Rome, Italy.

Master Degree in Chemistry, 110 cum laude/110.

- Thesis: *Development of an electrochemical sensor modified with carbon black and gold nanoparticles for the detection of As(III) in drinking water.*

Supervisors: Dr. Fabiana Arduini, Prof. Giuseppe Palleschi

09/2006 – 09/2009

Department of Chemical Science and Technology, University of Rome “Tor Vergata”, Via della Ricerca Scientifica 1, 00133 Rome, Italy.

Bachelor Degree in Chemistry, 110 cum laude/110.

- Thesis: *Mechanism study of aggregation of chiral porphyrin derivatives.*

Supervisor: Dr. Donato Monti

Computer Skills

Good knowledge of Operating Systems Windows 8 and the package Microsoft Office 2010 (Microsoft Office Tools: Word, Excel, PowerPoint, Internet Explorer, Firefox, Outlook).

Good knowledge of Graphic software (Adobe Illustrator, Adobe Photoshop).

Good knowledge of Data Analysis software (SigmaPlot, Origin, Kaleidagraph).

Languages

Italian	Mother Tongue			
	Understanding	Reading	Speaking	Writing
English	B2	B2	B2	B2
Spanish	A2	A2	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user
- C1/2 Proficient user. Common European Framework of Reference for Languages.

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Personal Interests

Futsal Player (I play in official league).

Futsal Coach from 2011-now (Under 16/18/21 players).

Photography and natural sciences lover, with the passion for music and theatre. Writing educational essay on chemistry.

Grants and prizes

1. Postdoctoral Fellowship 2017 – Fondazione Umberto Veronesi (27000 euro).
2. Best PhD thesis in Electrochemistry 2016 from Italian Chemical Society sponsored by “Fondazione DeNora” (1000 euro).
3. Third prize in “Chemistry and Light Contest” organized by ChemistryViews.org, with an essay titled “Chirality helps light to strike cancer”.
http://www.chemistryviews.org/details/news/8435401/Chemistry_and_Light_Contest_The_Winners.html

Scientific publications

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**.
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**.
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 H₂O₂ by using Screen-Printed Electrode*. **Electrochemistry Communications** **47** (2014) **63-66**.
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**.
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**.
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**.
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**.
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**.
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**.
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**.
11. **S. Cinti**, F. Santella, D. Moscone, F. Arduini. *Hg²⁺ 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**.
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**.

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.
14. J. Kim, I. Jeerapan, S. Imani, T.N. Cho, A.J. Bandodkar, **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.
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.
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.
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.
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.
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** DOI: 10.1016/j.snb.2017.07.161.

Books, Chapters

1. C. Zanardi, L. Pigani, R. Seeber, F. Terzi, F. Arduini, **S. Cinti**, D. Moscone, G. Palleschi. *Carbon black/gold nanoparticles composite for efficient amperometric sensors*. In **Sensors**, pp. 159-163. Springer International Publishing, 2015.
2. F. Arduini, **S. Cinti**, V. Scognamiglio, D. Moscone. *Paper-Based Electrochemical Devices in Biomedical Field: Recent Advances and Perspectives*. In **Comprehensive Analytical Chemistry: Past, Present and Future Challenges of Biosensors and Bioanalytical Tools in Analytical Chemistry: A Tribute to Professor Marco Mascini**, DOI: 10.1016/bs.coac.2017.06.005, Elsevier, 2017.

Conference papers

1. D. Talarico, F. Arduini, **S. Cinti**, A. Amine, D. Moscone, G. Palleschi. *Screen-printed electrode modified with the carbon black nanoparticles as a cost-effective and sensitive sensor for phosphate detection*. In **AISEM Annual Conference, 2015 XVIII**, pp. 1-4. IEEE, 2015.

Invited Seminars

Nationals

1. **S. Cinti**
The role of paper as smart material applied to environmental electroanalysis. Invited by Prof. Luigi Falciola, Department of Chemistry, University of Milan, Italy, April 28, 2017.

Internationals

1. **S. Cinti**
Paper-based electrochemical sensors for detection of pesticide and phosphate. Invited by Dr. Marja Nissinen, Oulu University of Applied Science, Finland, May 16, 2017.

Presentations at conferences

Nationals

1. D. Moscone, F. Arduini, **S. Cinti**, G. Palleschi
Sviluppo di nuovi sensori elettrochimici monouso modificati con nanoparticelle di Au e Carbon Black per la determinazione di As in acque potabili (poster presentation) IX Congresso Italiano Chimica degli Alimenti, Ischia (NA), June 3-7, 2012.
2. F. Arduini, C. Zanardi, **S. Cinti**, N. Alaimo, F. Terzi, R. Seeber, D. Moscone, G. Palleschi
Development of sensors based on screen-printed electrodes modified with carbon black and gold nanoparticles nanocomposite (oral presentation) XXIII Congresso Nazionale della Società Chimica Italiana, Divisione di Chimica Analitica,

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Isola D'Elba (LI), September 16-20, 2012.

3. F. Arduini, A. Amine, M. Forchielli, D. Neagu, **S. Cinti**, G. Vellucci, I. Cacciotti, F. Nanni, G. Palleschi, D. Moscone
Screen-printed electrodes modified with nanostructured carbon black as platform to develop sensors and biosensors (oral presentation) XXIV Congresso Nazionale della Società Chimica Italiana, Divisione di Chimica Analitica, Sestri Levante (GE), September 15-19, 2013.
4. F. Arduini, **S. Cinti**, D. Neagu, D. Talarico, G. Vellucci, G. Palleschi, D. Moscone
Sensors based on screen-printed electrodes modified with carbon black (oral presentation) GEI Giornate dell'elettrochimica italiana, Pavia, September 22-27, 2013.
5. C. Zanardi, F. Arduini, **S. Cinti**, D. Moscone, G. Palleschi, L. Pigani, R. Seeber, F. Terzi. Carbon black – gold nanoparticles composite for the development of efficient amperometric sensors (poster presentation), II Convegno Nazionale Sensori, Roma, February 19-21, 2014.
6. **S. Cinti**, F. Arduini, G. Palleschi, D. Moscone, A.J. Killard
Development of hydrogen peroxide sensor based on screen-printed electrode modified with inkjet printed prussian blue nanoparticles (oral presentation), II Convegno Nazionale Sensori, Roma, February 19-21, 2014.
7. **S. Cinti**, F. Arduini, G. Palleschi, D. Moscone, A.J. Killard
Cholesterol bioassay by-means of microfluidic device based on prussian blue nanoparticles modified screen-printed electrodes (poster presentation), XXIV Congresso Nazionale della Società Chimica Italiana, Divisione di Chimica Analitica, Arcavacata di Rende (CS), September 7-12, 2014.
8. D. Talarico, F. Arduini, **S. Cinti**, A. Amine, D. Moscone, G. Palleschi
Cost-effective and sensitive sensor for phosphate detection by screen-printed electrodes modified with carbon black nanoparticles (poster presentation), XXVIII AISEM Annual Conference, Fondazione Bruno Kessler, Trento, February 3-5, 2015.
9. **S. Cinti**, G. Valdés-Ramírez, W. Gao, J. Li, G. Palleschi, J. Wang
Enzyme-free Janus particles accelerated degradation and detection of organophosphorous nerve agents using SPE: a proof of concept approach (oral presentation), GS 2015 - Sensori e biosensori: stato dell'arte e nuove prospettive, Parma, June 15-17, 2015.
10. **S. Cinti**, D. Talarico, F. Arduini, G. Palleschi, D. Moscone
All-in-paper electrochemical sensor to detect phosphates (oral presentation), XXV Congresso Nazionale della Società Chimica Italiana, Divisione di Chimica Analitica, Trieste, September 13-17, 2015.
11. **S. Cinti**, M. Basso, F. Arduini, G. Palleschi, D. Moscone
Paper as substrate for screen-printed electrodes (poster presentation), Terzo Convegno Nazionale Sensori, Roma, February 23-25, 2016.
12. **S. Cinti**, F. Arduini, G. Palleschi, D. Moscone
A paper based-nanomodified electrochemical biosensor for ethanol detection in beers (oral presentation), Bioanalitica 2016 "Chimica bioanalitica e nanotecnologie", Bologna, July 4, 2016.
13. **S. Cinti**
Nano/micromaterial-driven electroanalysis enhancement: facile approaches to improve (bio)sensing (oral presentation), Giornate dell'Elettrochimica Italiana 2016, Gargnano (Bs), September 11-14, 2016.
14. **S. Cinti**
Ricercatori in classe per Fondazione Umberto Veronesi (oral presentation), Secondary school ITIS Giovanni Giorgi, Roma, March 1, 2017.
15. **S. Cinti**, F. Arduini, G. Palleschi, D. Moscone
Paper as substrate in bioelectroanalysis for healthcare applications (keynote), Giornate di Chimica Analitica in memoria del Prof. Francesco Dondi, Ferrara, July 10-11, 2017.

Internationals

1. **S. Cinti**, F. Arduini, G. Palleschi, D. Moscone, A.J. Killard
Amperometric detection of hydrogen peroxide at Prussian blue nanoparticle-modified electrodes (poster presentation), Electrochem 2013, Southampton, UK, September 1-3, 2013.
2. **S. Cinti**
Prussian Blue: "artificial peroxidase" to detect H₂O₂ (oral presentation), 2nd Workshop on biosensors for water monitoring, University of Rome Tor Vergata, April 8-10, 2015.
3. **S. Cinti**, F. Arduini, Z. Zahid, G. Palleschi, D. Moscone
Fully integrated ready-to-use paper-based electrochemical biosensor to detect nerve agents (oral presentation), Biosensors 2016, Gothenburg, Sweden, May 25-27, 2016.

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Rome, 12 July 2017

Stefano Cinti

Handwritten signature of Stefano Cinti in black ink.

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