

ALLEGATO A

UNIVERSITÀ DEGLI STUDI DI MILANO

Procedura di selezione per la chiamata a professore di II fascia da ricoprire ai sensi dell'art. 18, commi 1 e 4, della Legge n. 240/2010 per il settore concorsuale 03/A1 - Chimica Analitica,
(settore scientifico-disciplinare CHIM/01 - Chimica Analitica)
presso il Dipartimento di CHIMICA, Codice concorso 4975

ADRIANO AMBROSI **CURRICULUM VITAE**

(N.B. IL CURRICULUM NON DEVE ECCEDERE LE 30 PAGINE E DEVE CONTENERE GLI ELEMENTI CHE IL CANDIDATO RITIENE UTILI AI FINI DELLA VALUTAZIONE.

LE VOCI INSERITE NEL FACSIMILE SONO A TITOLO PURAMENTE ESEMPLIFICATIVO E POSSONO ESSERE SOSTITUITE, MODIFICATE O INTEGRATE)

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	AMBROSI
NOME	ADRIANO
DATA DI NASCITA	01 OTTOBRE 1976

TITOLI

TITOLO DI STUDIO

(indicare la Laurea conseguita inserendo titolo, Ateneo, data di conseguimento, ecc.)

Laurea in CHIMICA, Sapienza Università di Roma
Data di conseguimento: 16 Luglio 2003
Titolo Tesi: Determinazione elettrochimica di principi farmaceutici in acque superficiali
Relatore: Prof. Luigi Campanella
A.A.: 2002-2003

TITOLO DI DOTTORE DI RICERCA O EQUIVALENTI, OVVERO, PER I SETTORI INTERESSATI, DEL DIPLOMA DI SPECIALIZZAZIONE MEDICA O EQUIVALENTE, CONSEGUITO IN ITALIA O ALL'ESTERO

(inserire titolo, ente, data di conseguimento, ecc.)

Dottore di Ricerca (PhD), School of Chemical Sciences, Dublin City University, Dublin, Ireland.
Data di conseguimento: 06 Novembre 2007
Titolo Tesi: The application of nanomaterials in electrochemical sensors and biosensors
Relatore (Supervisor): Prof. Malcolm R. Smyth
Co-Supervisor: Dr. Anthony J. Killard

ALTRI TITOLI CONSEGUITI

(inserire titolo, ente, data di conseguimento, ecc.)

ND

ATTIVITÀ DIDATTICA

INSEGNAMENTI E MODULI

(inserire anno accademico, corso laurea, numero di ore frontali, eventuale CFU)

La seguente attività di insegnamento è stata eseguita presso la Qingdao University of Science and Technology (QUST), Qingdao, China, in virtù dell'incarico a tempo determinato (non-tenured) di Adjunct Assoc Professor (Professore associato aggregato).

Moduli per studenti di Laurea Triennale/Magistrale:

- Modulo: **INTRODUCTION TO MATERIAL CHARACTERIZATION TECHNIQUES**

Corso di Laurea: **Applied Chemistry**

A.A.: **2021-2022 (SEMESTRE I)**

No.ore: **26 ore** (13 settimane in modalita Online)

Presso: **Qingdao University of Science and Technology, Qingdao, China.**

Lingua: **Inglese**

- Modulo: **CURRENT TOPICS IN ANALYTICAL AND BIOANALYTICAL CHEMISTRY**

Corso di Laurea: **Applied Chemistry**

A.A.: **2021-2022 (SEMESTRE II)**

No.ore: **26 ore** (13 settimane in modalita Online)

Presso: **Qingdao University of Science and Technology, Qingdao, China.**

Lingua: **Inglese**

- Modulo: **INTRODUCTION TO CHEMICAL SENSORS AND BIOSENSORS**

Corso di Laurea: **Applied Chemistry**

A.A.: **2021-2022 (SEMESTRE II)**

No.ore: **4 ore** (2 settimane in modalita Online)

Presso: **Qingdao University of Science and Technology, Qingdao, China.**

Lingua: **Inglese**

- Modulo: **INTRODUCTION TO 3D PRINTING FOR APPLIED CHEMISTRY**

Corso di Laurea: **Applied Chemistry**

A.A.: **2021-2022 (SEMESTRE II)**

No.ore: **4 ore** (2 settimane in modalita Online)

Presso: **Qingdao University of Science and Technology, Qingdao, China.**

Lingua: **Inglese**

Moduli per studenti di Master/Dottorato:

- Modulo: **ADVANCED CHARACTERIZATION METHODS**

A.A.: **2021-2022 (SEMESTRE I)**

No.ore: **24 ore** (12 settimane in modalita Online)

Presso: **Qingdao University of Science and Technology, Qingdao, China.**

Lingua: **Inglese**

- Modulo: **ADVANCED METHODS IN ANALYTICAL AND BIOANALYTICAL CHEMISTRY**

A.A.: **2021-2022 (SEMESTRE II)**

No.ore: **24 ore** (12 settimane in modalita Online)

Presso: **Qingdao University of Science and Technology, Qingdao, China.**

Lingua: **Inglese**

ATTIVITÀ DI DIDATTICA INTEGRATIVA E DI SERVIZIO AGLI STUDENTI

ATTIVITÀ DI RELATORE DI ELABORATI DI LAUREA, DI TESI DI LAUREA MAGISTRALE, DI TESI DI DOTTORATO E DI TESI DI SPECIALIZZAZIONE

(inserire anno accademico, ateneo, corso laurea, ecc.)

- Tesi di Laurea Magistrale

Studente: **Federico Airò**

Titolo Tesi: **Application of Nanoparticles to the analysis of biomarkers**

Ateneo: **Università degli studi di Milano - Bicocca**

A.A.: **2009-2010**

Documentazione disponibile:

- Tesi: PDF
- Articolo pubblicato: A. Ambrosi, F. Airò, A. Merkoçi, *Enhanced Gold Nanoparticle Based ELISA for a Breast Cancer Biomarker*, *Anal. Chem.*, **82**, **2010**, 1151-1156.

- Tesi di Laurea Triennale (aka "Mini-Final Year Project")

Studente: **Hui Kai Hwee**

Titolo Tesi: **Electrochemical Detection of Gallic Acid in Tea samples with Boron- and Nitrogen-Doped Graphene Sensors**

Ateneo: **Nanyang Technological University Singapore**

A.A.: **2014-2015**

Documentazione disponibile:

- Tesi: PDF
- Articolo Pubblicato: K. H. Hui, A. Ambrosi, Z. Sofer, M. Pumera, A. Bonanni, *The dopant type and amount governs the electrochemical performance of graphene sensors for the quantification of the antioxidant activity*, *Nanoscale*, **7**, **2015**, 9040-9045.

- Tesi di Laurea Magistrale (aka "Final Year Project")

Studente: **Chng Chu'Er**

Titolo Tesi: **Selective Electrochemical Detection of Quinine in Tonic Water Drinks based on Graphene Platforms**

Ateneo: **Nanyang Technological University Singapore**

A.A.: **2014-2015**

Documentazione disponibile:

- Tesi: PDF
- Articolo Pubblicato: C. Chng, A. Ambrosi, C. K. Chua, M. Pumera, A. Bonanni, *Chemically reduced graphene oxide for the assessment of food quality: how the electrochemical platform should be tailored to the application*, *Chem. Eur. J.*, **23**, **2017**, 1930-1936.

- Tesi di Laurea Magistrale (aka "Final Year Project")

Studente: **Bella Rosa Liyarita**

Titolo Tesi: **3D-printed Electrodes for Sensing of Biological Molecules**

Ateneo: **Nanyang Technological University Singapore**

A.A.: **2016-2017**

Documentazione disponibile:

- Tesi: PDF
- Articolo Pubblicato: B. R. Liyarita, A. Ambrosi, M. Pumera, *3D-printed Electrodes for Sensing of Biologically Active Molecules*, *Electroanalysis*, **30**, **2018**, 1319-1326.

- Tesi di Laurea Magistrale (aka "Final Year Project")

Studente: **Cavin Tan**

Titolo Tesi: **Modified 3D-printed Electrode for Detection of Nitro-Aromatic Environmental Pollutants**

Ateneo: **Nanyang Technological University Singapore**

A.A.: **2016-2017**

Documentazione disponibile:

- Tesi: PDF
 - Articolo Pubblicato: C. Tan, M. Z. M. Nasir, A. Ambrosi, M. Pumera, *3D Printed Electrodes for Detection of Nitroaromatic Explosives and Nerve Agents*, *Anal. Chem.*, 89, 2017, 8995-9001.
- Tesi di Laurea Magistrale (aka "Final Year Project")
 Studente: **Eugene Ho Hong Zhuang**
 Titolo Tesi: **Simultaneous Detection of Biomarkers using 3D-Printed Electrodes**
 Ateneo: **Nanyang Technological University Singapore**
 A.A.: **2016-2017**
 Documentazione disponibile:
 - Tesi: PDF
 - Articolo Pubblicato: E. H. Z. Ho, A. Ambrosi, M. Pumera, *Additive Manufacturing of Electrochemical Interfaces: Simultaneous Detection of Biomarkers*, *App. Mater. Today*, 12, 2018, 43-50.
- Tesi di Laurea Magistrale (aka "Final Year Project")
 Studente: **Ke Yau Lee**
 Titolo Tesi: **Heavy Metals Detection by Anodic Stripping Voltammetry with 3D-Printed Electrodes**
 Ateneo: **Nanyang Technological University Singapore**
 A.A.: **2016-2017**
 Documentazione disponibile:
 - Tesi: PDF
 - Articolo Pubblicato: K. Y. Lee, A. Ambrosi, M. Pumera, *3D-Printed Metal Electrodes for Heavy Metals Detection by Anodic Stripping Voltammetry*, *Electroanalysis*, 29, 2017, 2444-2453.

ATTIVITÀ DI TUTORATO DEGLI STUDENTI DI CORSI DI LAUREA E DI LAUREA MAGISTRALE E DI TUTORATO DI DOTTORANDI DI RICERCA
(inserire anno accademico, corso laurea, ecc.)

- Laboratory Teaching Assistant (Tutor di Laboratorio per studenti del corso di laurea in Chemical Sciences)
 Presso: **Dublin City University, Ireland.**
 Periodo: **2005-2007**
 - Co-supervisione e tutoraggio di 18 studenti di dottorato
 Presso: **Nanyang Technological University, Singapore.**
 Periodo: **2010-2021**
 Ruolo ricoperto: Ricercatore Senior (Senior Research Fellow)
- Vedere pubblicazioni prodotte (Primo autore = Studente di dottorato):
1. Rachel Rui Xia Lim, Wei Li Ang, **Adriano Ambrosi**, Zdeněk Sofer, Alessandra Bonanni, *Electroactive nanocarbon materials as signaling tags for electrochemical PCR*, *Talanta*, 245, 2022, 123479.
 2. Wei Li Ang, Rachel Rui Xia Lim, **Adriano Ambrosi**, Alessandra Bonanni, *Rapid electrochemical detection of COVID-19 genomic sequence with dual-function graphene nanocolloids based biosensor*, *FlatChem*, 32, 2022, 100336.
 3. Zhen Song, Wei Li Ang, Jiri Sturala, Vlastimil Mazanek, Petr Marvan, Zdeněk Sofer, **Adriano Ambrosi**, Caifeng Ding, Xiliang Luo, Alessandra Bonanni, *Functionalized Germanene-Based Nanomaterials for the Detection of Single Nucleotide Polymorphism*, *ACS Appl. Nano Mater.*, 4, 2021, 5164-5175.

4. Zhen Song, Yihui Ma, Min Chen, **Adriano Ambrosi**, Caifeng Ding, Xiliang Luo, *Electrochemical Biosensor with Enhanced Antifouling Capability for COVID-19 Nucleic Acid Detection in Complex Biological Media*, *Anal. Chem.*, 93, 2021, 5963-5971.
5. Lei Kong, **Adriano Ambrosi**, Muhammad Zafir Mohamad Nasir, Jianguo Guan, Martin Pumera, *Self-Propelled 3D-Printed "Aircraft Carrier" of Light-Powered Smart Micromachines for Large-Volume Nitroaromatic Explosives Removal*, *Adv. Funct. Mater.*, 19, 2019, 1903872.
6. Muhammad Zafir Mohamad Nasir, **Adriano Ambrosi**, Nam-Joon Cho, Martin Pumera, *Amphipathic Viral Peptide Detection via Rupture Impact Electrochemistry*, *Anal. Chem.*, 89, 2017, 11753-11757.
7. Xinyi Chia, **Adriano Ambrosi**, Petr Lazar, Zdeněk Sofer, Martin Pumera, *Electrocatalysis of layered Group 5 metallic transition metal dichalcogenides (MX_2 , $M = V, Nb$, and Ta ; $X = S, Se$, and Te)*, *J. Mater. Chem. A*, 4, 2016, 14241-14253.
8. Xinyi Chia, **Adriano Ambrosi**, Petr Lazar, Zdeněk Sofer, Jan Luxa, Martin Pumera, *Layered Platinum Dichalcogenides (PtS_2 , $PtSe_2$ and $PtTe_2$) Electrocatalysis: Experimental and Theoretical Studies*, *Adv. Funct. Mater.*, 26, 2016, 4306-4318.
9. Lu Wang, Zdeněk Sofer, Jan Luxa, David Sedmidubský, **Adriano Ambrosi**, Martin Pumera, *Layered rhenium sulfide on free-standing three-dimensional electrodes is highly catalytic for the hydrogen evolution reaction: Experimental and theoretical study*, *Electrochem. Commun.*, 63, 2016, 39-43.
10. Xinyi Chia, **Adriano Ambrosi**, Zdeněk Sofer, Jan Luxa, David Sedmidubský, Martin Pumera, *Anti- MoS_2 Nanostructures: Tl_2S and its Electrochemical and Electronic Properties*, *ACS Nano*, 10, 2016, 112-123.
11. Xinyi Chia, **Adriano Ambrosi**, Zdeněk Sofer, Jan Luxa, Martin Pumera, *Catalytic and charge transfer properties of transition metal dichalcogenides arising from electrochemical pretreatment*, *ACS Nano*, 9, 2015, 5164-5179.
12. Shu Min Tan, **Adriano Ambrosi**, Zdeněk Sofer, Martin Pumera, *Pristine Basal- and Edge-Plane-Oriented Molybdenite MoS_2 Exhibiting Highly Anisotropic Properties*, *Chem. Eur. J.*, 21, 2015, 7170-7178.
13. Muhammad Zafir Mohamad Nasir, Zdeněk Sofer, **Adriano Ambrosi**, Martin Pumera, *A limited anodic and cathodic potential window of MoS_2 : limitations in electrochemical applications*, *Nanoscale*, 7, 2015, 3126-3129.
14. Alex Yong Sheng Eng, **Adriano Ambrosi**, Zdeněk Sofer, Peter Simek, Martin Pumera, *Electrochemistry of Transition Metal Dichalcogenides: Strong Dependence on the Metal-to-Chalcogen Composition and Exfoliation Method*, *ACS Nano*, 8, 2014, 12185-12198.
15. Xinyi Chia, **Adriano Ambrosi**, David Sedmidubský, Zdeněk Sofer, Martin Pumera, *Precise Tuning of the Charge Transfer Kinetics and Catalytic Properties of MoS_2 materials via Electrochemical Methods*, *Chem. Eur. J.*, 20, 2014, 17426-17432.
16. Chun Kiang Chua, **Adriano Ambrosi**, Zdeněk Sofer, Anna Macková, Vladimír Havránek, Ivo Tomandl, Martin Pumera, *Chemical preparation of graphene materials results in extensive unintentional doping with heteroatoms and metals*, *Chem. Eur. J.*, 20, 2014, 15760-15767.
17. Adeline Loo Huiling, **Adriano Ambrosi**, Alessandra Bonanni, Martin Pumera, *Molybdenum Disulfide (MoS_2) Nanoflakes as Inherently Electroactive Labels for DNA Hybridization Detection*, *Nanoscale*, 6, 2014, 11971-11975.

18. Lu Wang, Adriano Ambrosi, Zdeněk Sofer, Petr Šimek, Martin Pumera, *3D-graphene for electrocatalysis of oxygen reduction reaction: Increasing number of layers increases the catalytic effect*, **Electrochem. Commun.**, 46, 2014, 148-151.
19. Adeline Loo Huiling, Adriano Ambrosi, Alessandra Bonanni, Martin Pumera, *CVD graphene based immunosensor*, **RSC Advances**, 4, 2014, 23952-23956.
20. Shu Min Tan, Adriano Ambrosi, Chun Kiang Chua, Martin Pumera, *Electron transfer properties of chemically reduced graphene materials with different oxygen content*, **J. Mater. Chem. A**, 2, 2014,
21. Xinyi Chia, Adriano Ambrosi, Michal Otyepka, Radek Zbořil, Martin Pumera, *Fluorographites (CF_x)_n Heterogeneous Electron Transfer Increases with Increasing Level of Fluorination: Towards Sensing of Biomolecules*, **Chem. Eur. J.**, 20, 2014, 6665-6671.
22. Shu Min Tan, Adriano Ambrosi, Bahareh Khezri, Richard D. Webster, Martin Pumera, *Towards electrochemical purification of chemically reduced graphene oxide from redox accessible impurities*, **Phys. Chem. Chem. Phys.**, 16, 2014, 7058-7065.
23. Guanjia Zhao, Adriano Ambrosi, Martin Pumera, *Clean Room-Free Rapid Fabrication of Roll-Up Self-Powered Catalytic Microengines*, **J. Mater. Chem. A**, 2, 2014, 1219-1223.
24. Xinyi Chia, Adriano Ambrosi, Martin Pumera, *Redox reaction of p-aminophenol at carbon nanotube electrodes is accelerated by carbonaceous impurities*, **Electrochem. Commun.**, 38, 2014, 1-3.
25. Lu Wang, Adriano Ambrosi, Martin Pumera, *"Metal-Free" Catalytic Oxygen Reduction Reaction on Heteroatom-Doped Graphene is Caused by Trace Metal Impurities*, **Angew. Chem. Int. Ed.**, 52, 2013, 13818-13821.
26. Chun Kiang Chua, Adriano Ambrosi, Martin Pumera, *Prolonged exposure of graphite oxide to soft X-Ray irradiation during XPS measurements leads to alterations of the chemical composition*, **Analyst**, 138, 2013, 7012-7015.
27. Alex Yong Sheng Eng, Adriano Ambrosi, Chun Kiang Chua, Filip Šaněk, Zdeněk Sofer, Martin Pumera, *Unusual Inherent Electrochemistry of Graphene Oxides Prepared Using Permanganate Oxidants*, **Chem. Eur. J.**, 19, 2013, 12673-12683.
28. Lu Wang, Adriano Ambrosi, Martin Pumera, *Carbonaceous Impurities in Carbon Nanotubes are Responsible for Accelerated Electrochemistry of Cytochrome C*, **Anal. Chem.**, 85, 2013, 6195-6197.
29. Lu Wang, Adriano Ambrosi, Martin Pumera, *Could Carbonaceous Impurities in Reduced Graphenes be Responsible for Some of Their Extraordinary Electrocatalytic Activities?*, **Chem. Asian J.**, 8, 2013, 1200-1204.
30. Guanjia Zhao, Adriano Ambrosi, Martin Pumera, *Self-propelled Nanojets via Template Electrodeposition*, **Nanoscale**, 5, 2013, 1319-1324.
31. Wei Zhe Teo, Adriano Ambrosi, Martin Pumera, *Direct Electrochemistry of Copper Oxide Nanoparticles in Alkaline Media*, **Electrochem. Commun.**, 28, 2013, 51-53.
32. Lu Wang, Adriano Ambrosi, Martin Pumera, *Carbonaceous Impurities in Carbon Nanotubes are Responsible for Accelerated Electrochemistry of Acetaminophen*, **Electrochem. Commun.**, 26, 2013, 71-73.
33. Colin Hong An Wong, Adriano Ambrosi, Martin Pumera, *Thermally Reduced Graphenes Exhibiting Close Relationship to Amorphous Carbon*, **Nanoscale**, 4, 2012, 4972-4977.

34. Hwee Ling Poh, Filip Šaněk, **Adriano Ambrosi**, Guanjia Zhao, Zdeněk Sofer, Martin Pumera, *Graphenes prepared by Staudenmaier, Hofmann and Hummers methods with consequent thermal exfoliation exhibit very different electrochemical properties*, **Nanoscale**, 4, 2012, 3515-3522.
35. Chun Kiang Chua, **Adriano Ambrosi**, Martin Pumera, *Introducing Dichlorocarbene in Graphene*, **Chem. Commun.**, 48, 2012, 5376-5378.
36. Chun Kiang Chua, **Adriano Ambrosi**, Martin Pumera, *Graphene oxide reduction by standard industrial reducing agent: Thiourea dioxide*, **J. Mater. Chem.**, 22, 2012, 11054-11061.
37. Adeline Huiling Loo, Alessandra Bonanni, **Adriano Ambrosi**, Hwee Ling Poh, Martin Pumera, *Impedimetric Immunoglobulin G Immunosensor based on Chemically Modified Graphenes*, **Nanoscale**, 4, 2012, 921-925.
38. James Guo Sheng Moo, **Adriano Ambrosi**, Alessandra Bonanni, Martin Pumera, *Inherent Electrochemistry and Activation of Chemically Modified Graphenes for Electrochemical Applications*, **Chem. Asian J.**, 7, 2012, 759-770.
39. Chun Kiang Chua, **Adriano Ambrosi**, Martin Pumera, *Graphene based nanomaterials as electrochemical detectors in Lab-on-a-chip devices*, **Electrochem. Commun.**, 13, 2011, 517-519.
40. Maria Guix, Briza Pérez-López, Melike Sahin, Mònica Roldán, **Adriano Ambrosi**, Arben Merkoçi, *Structural characterization by confocal laser scanning microscopy and electrochemical study of multi-walled carbon nanotube tyrosinase matrix for phenol detection*, **Analyst**, 135, 2010, 1918-1925.
41. Gina Alarcón, Maria Guix, **Adriano Ambrosi**, Maria Teresa Ramirez, Manuel Palomar, Arben Merkoçi, *Stable and sensitive flow through monitoring of phenol using a carbon nanotube based screen printed biosensor*, **Nanotechnology**, 21, 2010, 245502-245511.

SEMINARI

(inserire titolo del seminario, luogo, data, ecc.)

- 1) **3D printing for electrochemical applications**
Sapienza Università di Roma
Roma, Italia, 03 Luglio 2019
- 2) **3D printing for electrochemical applications**
Qingdao University of Science and Technology
Qingdao, Shandong province, China, 05 Dicembre 2019
- 3) **3D printing for electrochemistry and the inverse**
Manchester Metropolitan University
Manchester, UK, 08 Gennaio 2020
- 4) **3D printing for electrochemistry and by electrochemistry (Webinar)**
Institute of Materials Research and Engineering (A-Star)
Singapore, 15 Aprile 2021
- 5) **Introduction to 3D printing for Applied Chemistry (Webinar)**
Qingdao University of Science and Technology
Qingdao, Shandong Province, China, 15 Giugno 2021
- 6) **2D materials and 3D Printing for electrochemical sensing and environmental sustainability actions (Webinar)**
Institute of Materials Research and Engineering (A*Star)
Singapore, 09 Luglio 2022

ATTIVITÀ DI RICERCA SCIENTIFICA

PUBBLICAZIONI SCIENTIFICHE

(per ciascuna pubblicazione indicare: nomi degli autori, titolo completo, casa editrice, data e luogo di pubblicazione, codice ISBN, ISSN, DOI o altro equivalente)

RIASSUNTO ATTIVITÀ DI RICERCA SCIENTIFICA IN NUMERI

- **2018 Highly cited researcher (Cross-Field category)** (top 1% most cited researchers worldwide by Clarivate Analytics)
- **11262** citazioni totali da Web of Science (<https://publons.com/researcher/2809241/adriano-ambrosi/>)
- **126 articoli scientifici pubblicati** in riviste internazionali (ISI peer-reviewed)
- **91** citazioni in media per articolo
- **53 h-index**
- **35** articoli in giornali con IF > 8
- **17** articoli evidenziati con la copertina del giornale
- **6** articoli evidenziati come news
- **3 articoli/capitoli di libri**
- **1 articolo tipo conference proceeding**

LISTA COMPLETA DELLE PUBBLICAZIONI SCIENTIFICHE

Articoli in Rivista Internazionale

126. Rachel Rui Xia Lim, Wei Li Ang, **Adriano Ambrosi**, Zdeněk Sofer, Alessandra Bonanni*, *Electroactive nanocarbon materials as signaling tags for electrochemical PCR*, **Talanta**, 245, 2022, 123479.
125. Wei Li Ang, Rachel Rui Xia Lim, **Adriano Ambrosi**, Alessandra Bonanni*, *Rapid electrochemical detection of COVID-19 genomic sequence with dual-function graphene nanocolloids based biosensor*, **FlatChem**, 32, 2022, 100336.
124. **Adriano Ambrosi***, Manisha Singh, Richard D. Webster, Terry W. J. Steele*, *Precise control of diazirine reduction to tune mechanical properties of electrocuring adhesives*, **ChemElectroChem**, 8, 2021, 2715-2725.
123. **Adriano Ambrosi***, Alessandra Bonanni, *How 3D printing can boost advances in analytical and bioanalytical chemistry*, **Microchimica Acta**, 188, 2021, 165.
122. Zhen Song, Wei Li Ang, Jiri Sturala, Vlastimil Mazanek, Petr Marvan, Zdeněk Sofer, **Adriano Ambrosi**, Caifeng Ding, Xiliang Luo,* Alessandra Bonanni*, *Functionalized Germanene-Based Nanomaterials for the Detection of Single Nucleotide Polymorphism*, **ACS Appl. Nano Mater.**, 4, 2021, 5164-5175.
121. Zhen Song, Yihui Ma, Min Chen, **Adriano Ambrosi**, Caifeng Ding*, Xiliang Luo*, *Electrochemical Biosensor with Enhanced Antifouling Capability for COVID-19 Nucleic Acid Detection in Complex Biological Media*, **Anal. Chem.**, 93, 2021, 5963-5971.

120. **Adriano Ambrosi***, Raymond Rong Sheng Shi, Richard D. Webster*, *3D-printing for electrolytic processes and electrochemical flow systems*, **J. Mater. Chem. A**, 8, 2020, 21902-21929.
119. **Adriano Ambrosi***, *Electronics charges into the third dimension*, **Nature Electron.**, 3, 2020, 189-190.
118. **Adriano Ambrosi***, Richard D. Webster*, *3D-printing for aqueous and non-aqueous redox flow batteries*, **Curr. Opin. Electrochem.**, 20, 2020, 28-35.
117. **Adriano Ambrosi**, Richard D. Webster, Martin Pumera*, *Electrochemically driven multi-material 3D-printing*, **App. Mater. Today**, 18, 2020, 100530.
116. Lei Kong, **Adriano Ambrosi**, Muhammad Zafir Mohamad Nasir, Jianguo Guan,* Martin Pumera*, *Self-Propelled 3D-Printed "Aircraft Carrier" of Light-Powered Smart Micromachines for Large-Volume Nitroaromatic Explosives Removal*, **Adv. Funct. Mater.**, 19, 2019, 1903872.
115. **Adriano Ambrosi**, Martin Pumera*, *Multimaterial 3D-printed water electrolyzer with earth-abundant electrodeposited catalysts*, **ACS Sustainable Chem. Eng.**, 6, 2018, 16968–16975.
114. **Adriano Ambrosi**, Martin Pumera*, *Electrochemical exfoliation of MoS₂ crystal for hydrogen electrogeneration*, **Chem. Eur. J.**, 24, 2018, 18551-18555.
113. Jiri Sturala, **Adriano Ambrosi**, Zdeněk Sofer, Martin Pumera*, *Covalent functionalization of exfoliated arsenic with chlorocarbene*, **Angew. Chem. Int. Ed.**, 57, 2018, 14837-14840.
112. **Adriano Ambrosi**, Martin Pumera*, *Exfoliation of layered materials using electrochemistry*, **Chem. Soc. Rev.**, 47, 2018, 7213-7224.
111. **Adriano Ambrosi***, Martin Pumera*, *Self-contained polymer/metal 3D printed electrochemical platform for tailored water splitting*, **Adv. Funct. Mater.**, 28, 2018, 1700655.
110. Eugene Hong Zhuang Ho, **Adriano Ambrosi**, Martin Pumera*, *Additive Manufacturing of Electrochemical Interfaces: Simultaneous Detection of Biomarkers*, **App. Mater. Today**, 12, 2018, 43-50.
109. Bella Rosa Liyarita, **Adriano Ambrosi**, Martin Pumera*, *3D-printed Electrodes for Sensing of Biologically Active Molecules*, **Electroanalysis**, 30, 2018, 1319-1326.
108. Muhammad Zafir Mohamad Nasir, **Adriano Ambrosi**, Nam-Joon Cho, Martin Pumera*, *Amphipathic Viral Peptide Detection via Rupture Impact Electrochemistry*, **Anal. Chem.**, 89, 2017, 11753-11757.
107. Siew Cheng Tay, Muhammad Zafir Mohamad Nasir, **Adriano Ambrosi**, Martin Pumera*, *3D-printed metal electrodes for electrochemical detection of phenols*, **App. Mater. Today**, 9, 2017, 212-219.
106. Cavin Tan, Muhammad Zafir Mohamad Nasir, **Adriano Ambrosi**, Martin Pumera*, *3D Printed Electrodes for Detection of Nitroaromatic Explosives and Nerve Agents*, **Anal. Chem.**, 89, 2017, 8995-9001.
105. Ke Yau Lee, **Adriano Ambrosi**, Martin Pumera*, *3D-Printed Metal Electrodes for Heavy Metals Detection by Anodic Stripping Voltammetry*, **Electroanalysis**, 29, 2017, 2444-2453.
104. **Adriano Ambrosi**, Zdeněk Sofer, Martin Pumera*, *Electrochemical Exfoliation of Layered Black Phosphorous into Phosphorene*, **Angew. Chem. Int. Ed.**, 56, 2017, 10443-10445.
103. Stanislav Presolski, Lu Wang, Adeline Huiling Loo, **Adriano Ambrosi**, Martin Pumera*, *Functional Nanosheet Synthons by Covalent Modification of Transition-Metal Dichalcogenides*, **Chem. Mater.**, 29, 2017, 2066-2073.

102. Chu'Er Chng, **Adriano Ambrosi**, Chun Kiang Chua, Martin Pumera, Alessandra Bonanni*, *Chemically reduced graphene oxide for the assessment of food quality: how the electrochemical platform should be tailored to the application*, **Chem. Eur. J.**, 23, 2017, 1930-1936.
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ORGANIZZAZIONE, DIREZIONE E COORDINAMENTO DI CENTRI O GRUPPI DI RICERCA NAZIONALI E INTERNAZIONALI O PARTECIPAZIONE AGLI STESSI

(per ciascuna voce inserire anno, ruolo, gruppo di ricerca, ecc.)

DIREZIONE GRUPPI DI RICERCA

- 2021(Nov)-oggi: 3D Printing and Electrochemistry Group
Sede: Institute of Materials Research and Engineering (IMRE), Singapore.
Ruolo: Group Leader

PARTECIPAZIONE A GRUPPI DI RICERCA

- 2004-2007: Sensors and Separation Group
Sede: Dublin City University, Dublin, Ireland.

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- **2007-2009:** Nanobioelectronics & Biosensors Group

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- **2009-2010:** Biomaterials System Group

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Supervisore: Prof. Richard D. Webster

- **2020-2020 (6 mesi):** Steele Research Group

Sede: Nanyang Technological University, Singapore.

Ruolo: Ricercatore Senior

Supervisore: Prof. Terry Steele

RESPONSABILITÀ DI PROGETTI DI RICERCA

- Responsabile del progetto finanziato da Shandong Province of China, Double-Hundred Program Research Fund. (WST2019011)

Titolo del progetto: **“3D Printing for Electrochemical Sensing and Energy Devices”**

Responsabili: **Adriano Ambrosi**

Totale finanziamento: **1,500,000 CNY** (~ 210,000 EUR)

Ruolo: Responsabile e curatore delle attività di ricerca del progetto

Periodo Finanziamento: dal 01-11-2019 al 31-10-2022

- Co-responsabile del progetto finanziato dal Ministry of Education (MOE) di Singapore, Academic Research Fund (AcRF) Tier 1 Grant. (RG47/21, 2021-T1-001-077)

Titolo del progetto: **“Electrocuring Resin for Advanced Manufacturing”**

Responsabili: **Terry Steele, Richard Webster, Adriano Ambrosi**

Totale finanziamento: **149,250 SGD** (~ 102,000 EUR)

Ruolo: Co-partecipazione nella preparazione della proposta di progetto e Responsabile e curatore delle attività di ricerca del progetto pertinenti all'uso di tecniche di elettrochimica

Periodo Finanziamento: dal 01-09-2021 al 31-08-2024

- Collaboratore nel progetto finanziato da Agency of Science Technology and Research, Individual Research Grant (IRG). (SERC A1783c0005)

Titolo del progetto: **“Advanced Autonomous Functional Nanomotors”**

Responsabili: **Martin Pumera**

Collaboratori: **Adriano Ambrosi, Carmen Mayorga**

Totale finanziamento: **612,000 SGD** (~ 420,000 EUR)

Ruolo: Curatore delle attività di ricerca del progetto pertinenti all'uso di tecniche di elettrochimica

Periodo Finanziamento: dal 01-06-2017 al 31-05-2020

ATTIVITÀ QUALI LA DIREZIONE O LA PARTECIPAZIONE A COMITATI EDITORIALI DI RIVISTE SCIENTIFICHE
(per ciascuna voce inserire anno, ruolo, rivista scientifica, ecc.)

- GUEST EDITOR for Topical Collection in **Microchimica Acta** journal (IF 5.8): *3D printing manufacturing technologies for the advancement of analytical sciences*.
(<https://link.springer.com/collections/jghcbgjibh>)
- EDITORIAL BOARD MEMBER of journal **NANO** (World Scientific)
(<https://www.worldscientific.com/page/nano/editorial-board>)
- REVIEWER per innumerevoli top journals in ACS, RSC, Wiley, Elsevier, Springer Nature come: Nature Electronics, Nature Communications, Nanoletters, Advanced Materials, Advanced Materials Technologies, Analytical Chemistry, Advanced Functional Materials, Microchimica Acta, Nanoscale, ACS Applied Materials & Interfaces, Analytica Chimica Acta, Talanta, Electroanalysis, Electrochemistry Communications, Electrochimica Acta, etc.

TITOLARITÀ DI BREVETTI

(per ciascun brevetto, inserire autori, titolo, tipologia, numero brevetto, ecc.)

Titolo: Electrocatalytic quantification of gold nanoparticles for cells analysis and other applications
Autori: Arben Merkoci, Alfredo de la Escosura-Muniz, Adriano Ambrosi, Marisa Maltez, Africa Gonzales-Fernandez, Christian Sanchez-Espinel, Belen Diaz-Freitas
No. brevetto: PCT/ES2009/070489

PREMI E RICONOSCIMENTI NAZIONALI E INTERNAZIONALI PER ATTIVITÀ DI RICERCA

(inserire premio, data, ente organizzatore, ecc.)

- **2018 Highly cited researcher** (Cross-Field category)
(top 1% most cited researchers worldwide by Clarivate Analytics/Web of Science)



- **8 Highly Cited Papers** in Academic Field of **CHEMISTRY**:
(top 1% most cited papers worldwide by Clarivate Analytics/Web of Science)



- 1) **Adriano Ambrosi**, Chun Kiang Chua, Alessandra Bonanni, Martin Pumera*, *Electrochemistry of Graphene and Related Materials*, **Chem. Rev.**, 114, 2014, 7150. (744 cit.)

- 2) Xinyi Chia, Alex Yong Sheng Eng, **Adriano Ambrosi**, Shu Min Tan, Martin Pumera*, *Electrochemistry of Nanostructured Layered Transition Metal Dichalcogenides*, **Chem. Rev.**, 115, 2015, 11941. (571 cit.)
- 3) **Adriano Ambrosi***, Martin Pumera*, *3D-printing technologies for electrochemical applications*, **Chem. Soc. Rev.**, 45, 2016, 2740. (475 cit.)
- 4) Martin Pumera*, Zdenek Sofer, **Adriano Ambrosi**, *Layered Transition Metal Dichalcogenides for Electrochemical Energy Generation and Storage: From Bulk to Thin Layers and Single 2-Dimensional Sheets*, **J. Mater. Chem. A**, 2, 2014, 8981. (449 cit.)
- 5) **Adriano Ambrosi**, Zdeněk Sofer, Martin Pumera*, *2H→1T Phase Transition and Hydrogen Evolution Activity of MoS₂, MoSe₂, WS₂ and WSe₂ Strongly Depends on the MX₂ composition*, **Chem. Commun.**, 51, 2015, 8450. (429 cit.)
- 6) Lu Wang, **Adriano Ambrosi**, Martin Pumera*, *"Metal-Free" Catalytic Oxygen Reduction Reaction on Heteroatom-Doped Graphene is Caused by Trace Metal Impurities*, **Angew. Chem. Int. Ed.**, 52, 2013, 13818. (293 cit.)
- 7) Hwee Ling Poh, Filip Šaněk, **Adriano Ambrosi**, Guanjia Zhao, Zdeněk Sofer, Martin Pumera*, *Graphenes prepared by Staudenmaier, Hofmann and Hummers methods with consequent thermal exfoliation exhibit very different electrochemical properties*, **Nanoscale**, 4, 2012, 3515. (285 cit.)
- 8) **Adriano Ambrosi**, Chun Kiang Chua, Naziah Mohamad Latiff, Adeline Huiling Loo, Colin Hong An Wong, Alex Yong Sheng Eng, Alessandra Bonanni, Martin Pumera*, *Graphene and its electrochemistry - an update*, **Chem. Soc. Rev.**, 45, 2016, 2458. (264 cit.)

PARTECIPAZIONE IN QUALITÀ DI RELATORE A CONGRESSI E CONVEGNI DI INTERESSE INTERNAZIONALE
(inserire titolo congresso/convegno, data, ecc.)

- **CONTRIBUTO ORALE** dal titolo: "Enhanced immunoanalysis based on gold nanoparticle labels"
Autori: **Adriano Ambrosi***, Arben Merkoçi, Anthony J Killard, Salvador Alegret and Malcolm R. Smyth
In occasione di: Analytical Research Forum
Tenutosi a: University of Strathclyde, Glasgow, UK, dal 16-07-2007 al 18-07-2007
- **CONTRIBUTO ORALE** dal titolo: "Gold nanoparticles as a novel alternative for electrochemical immunosensors"
Autori: **Adriano Ambrosi***, Arben Merkoci
In occasione di: XII Trobada Transfronterera sobre Sensors i Biosensors 2007
Tenutosi a: Ceret, France, dal 27-09-2007 al 28-09-2007
- **MEMBRO COMITATO SCIENTIFICO ORGANIZZATORE**: Arben Merkoci, **Adriano Ambrosi**, Alfredo de la Escosura-Muniz
In occasione di: "XIII TROBADA TRANSFRONTERERA SOBRE SENSORS I BIOSENSORS"
Tenutosi a: Centre de Congressos d'Andorra la Vella, Andorra, dal 18-09-2008 al 19-09-2008
- **CONTRIBUTO ORALE** dal titolo: "Electrochemistry for toxicity evaluation of Carbon Nanotubes: The influence on regulatory peptides"
Autori: **Adriano Ambrosi***, Martin Pumera
In occasione di: Workshop on "Materials Nanoarchitectonics for Sustainable Development"
Tenutosi a: Gora (Hakone), Giappone, dal 24-03-2010 al 26-03-2010
- **CONTRIBUTO ORALE (INVITED LECTURE)** dal titolo: "3D printing for electrochemical applications"
Autore: Adriano Ambrosi
Presso: Department of Inorganic Chemistry, University of Chemistry and Technology Prague, Czech Republic, il 28-06-2017

- **CONTRIBUTO ORALE (INVITED LECTURE)** dal titolo: "3D printing for electrochemical applications"
Autore: Adriano Ambrosi
Presso: Dipartimento di Chimica e Tecnologie Farmaceutiche, Sapienza Università di Roma, Roma, Italia, il 03-07-2019
- **CONTRIBUTO ORALE (INVITED LECTURE)** dal titolo: "3D printing for electrochemical applications"
Autore: Adriano Ambrosi
Presso: College of Chemistry and Molecular Engineering, Qingdao University of Science and Technology, Qingdao, Shandong province, China, il 05-12-2019
- **CONTRIBUTO ORALE (INVITED LECTURE)** dal titolo: " 3D printing for electrochemistry and the inverse"
Autore: Adriano Ambrosi
In occasione di: MMU Seminar series 2020
Presso: Department of Natural Sciences (Chemistry), Manchester Metropolitan University, Manchester, UK, il 08-01-2020
- **CONTRIBUTO ORALE (INVITED SEMINAR)** dal titolo: "3D printing for electrochemistry and by electrochemistry"
Autore: Adriano Ambrosi
In occasione di: IMRE Special Seminars
Presso: Institute for Materials Research and Engineering (IMRE) A*Star, Singapore, il 15-03-2021
- **CONTRIBUTO ORALE (INVITED SEMINAR)** dal titolo: "2D materials and 3D Printing for electrochemical sensing and environmental sustainability actions"
Autore: Adriano Ambrosi
In occasione di: IMRE Composite and Structural Division Monthly Scientific Seminars
Presso: Institute for Materials Research and Engineering (IMRE) A*Star, Singapore, il 09-07-2022
- **CONTRIBUTO ORALE** dal titolo: "2D Materials and 3D Printing for electrochemical sensing and sustainability applications"
Autori: Adriano Ambrosi
In occasione di: 73rd Annual ISE Meeting of the International Society of Electrochemistry
Online, dal 12-09-2022 al 16-09-2022

ATTIVITÀ GESTIONALI, ORGANIZZATIVE E DI SERVIZIO

INCARICHI DI GESTIONE E AD IMPEGNI ASSUNTI IN ORGANI COLLEGIALI E COMMISSIONI, PRESSO RILEVANTI ENTI PUBBLICI E PRIVATI E ORGANIZZAZIONI SCIENTIFICHE E CULTURALI, OVVERO PRESSO L'ATENEIO O ALTRI ATENEI

(inserire incarico/impegno, ente, data, ecc.)

- MEMBRO COMMISSIONE GIUDICANTE PER ESAME DI DOTTORATO INTERNAZIONALE

Studente dottorando: Alejandro Garcia-Miranda-Ferrari

Presso: Manchester Metropolitan University, Manchester, UK.

Data esame: 07 Gennaio 2020

Titolo Tesi: Fundamentals of electrochemistry of graphene and other 2D materials

- COMPONENTE COMMISSIONE ORGANIZZATRICE: Singapore National Junior Chemistry Olympiad 2021

Ruolo: Preparazione e correzione quiz.

Presso: Online platform, Singapore.

- **COMPONENTE COMITATO ORGANIZZATORE IMRE25 (1997-2022) CELEBRATIONS:**

Ruolo: Membro organizzatore di un evento sportivo celebrativo (Fun Run, Settembre 2022), Scientific committee per workshop (Settembre 2022).
Presso: Institute for Materials Research and Engineering (IMRE) A*Star, Singapore.

ATTIVITÀ CLINICO ASSISTENZIALI

(indicare, data, durata, ruolo, ente presso il quale si è prestata attività assistenziale, ecc.)

ND

Data

20 Maggio 2022

Luogo

Singapore