

ALLEGATO B AL VERBALE N. 2 - TITOLI E PUBBLICAZIONI VALUTABILI

PROCEDURA SELETTIVA DI CHIAMATA PER N. 1 POSTO DI RICERCATORE A TEMPO DETERMINATO DI TIPOLOGIA B PER IL SETTORE CONCORSUALE 03/B2 - SETTORE SCIENTIFICO-DISCIPLINARE CHIM/07 - PRESSO IL DIPARTIMENTO DI SCIENZE DI BASE E APPLICATE PER L'INGEGNERIA DELL'UNIVERSITÀ DEGLI STUDI DI ROMA "LA SAPIENZA" BANDITA CON D.R. N. 2267/2021 DEL 09.08.2021

CANDIDATO: Carlos Franco Pujante

VERIFICA TITOLI VALUTABILI:

1. *dottorato di ricerca di ricerca o equipollenti, conseguito in Italia o all'estero:*
Dottorato in Scienza Dei Materiali, conseguito l'11 novembre 2016 presso l'università Autonoma di Barcellona, Spagna, con votazione: eccellente cum Laude.
VALUTABILE
2. *eventuale attività didattica a livello universitario in Italia e/o all'estero:*
2011-2016 Supervision and tutoring two master students and one undergraduate PhD students working in the NANOMOL group. CSIC/ICMAB Unviersitat Autonoma de Barcelona.
VALUTABILE
2017-2020 Supervision and tutoring three undergraduate PhD students working in the deMello group ETH Zurich.
VALUTABILE
2018-2019 Practical lesson marked inside the Master of Microfluidics Synthetic Techniques. ETH Zurich.
VALUTABILE
2020-Present Supervision and mentoring a research group composed by 5 PhD students and two Master students. ETH Zurich.
VALUTABILE
2020 Supervisor of the Master Thesis with the title "*Porous Crystalline Framework Nanoparticles for Biomedical Applications*" ETH Zurich.
VALUTABILE
2020-2021 Supervisor of the Bachelor Thesis with the title "*Selective Embolisation*" ETH Zurich.
VALUTABILE
2021 Supervisor of the Bachelor Thesis with the title "*Polyethylenglycol and Polyethylenimine based hydrogel for selective transcatheter embolization*" ETH Zurich.
VALUTABILE
3. *documentata attività di formazione o di ricerca presso qualificati istituti italiani o stranieri:*
11/2012 - 01/2013 Pre-doctoral Stay, Dep. Organic chemistry, Murcia University, Spain.
VALUTABILE
03/2014 - 04/2014 Pre-doctoral Stay, Dep. of Physical Chemistry, Malga University, Spain.
VALUTABILE
06/2015 - 06/2015 Pre-doctoral Stay, Research group Electrochemical Nanoscience Lab of Prof. Thomas Wandlowski, Bern University, Switzerland.
VALUTABILE
02/2016 - 03/2016 Pre-doctoral Stay, Research group Supramolecular Nanomaterials and Interfaces Laboratory (SUNMIL) of Prof. Francesco Stellacci, Ecole Polytechnique Federale de Laussane (EPFL), Switzerland.
VALUTABILE
02/2017 - 07/2020 Postdoctoral researcher, Prof. A. deMello Research group, Department of Chemistry and Applied Biosciences, Eidgenössische Technische Hochschule Zürich (ETH), Zurich, Switzerland.
VALUTABILE

Marzo 2020 e Aprile 2019: Università la Sapienza Roma, Gruppo del Prof. Luciano Galantini: Misure di film di COF e MOF, previamente sintetizzati dal sottoscritto, mediante spettroscopia SAXS e WAXS.

VALUTABILE

08/2020 - Present Postdoctoral researcher, Prof. S. Pane i Vidal Research group, Multi-Scale Robotics Lab, Eidgenössische Technische Hochschule Zürich (ETH), Zurich, Switzerland.

VALUTABILE

4. *organizzazione, direzione e coordinamento di gruppi di ricerca nazionali e internazionali, o partecipazione agli stessi:*

2018-2022 Co-PI, *Ultra-versatile Structural PRINTing of amorphous and tuned crystalline matter on multiple substrates*. FET EU-Project

VALUTABILE

2019 Melbourne Synchrotron, *Accepted "Synchrotron Proposal"*

NON VALUTABILE perchè dalla documentazione non si evince il ruolo del candidato

5. *titolarità di brevetti e spin-off/start-up:*

inventore delle tecnologie descritte e protette dal brevetto EP3586956A1, PCT/EP2021/060580

VALUTABILE

brevetto PCT/US21/50686 il quale risulta ad oggi in fase di aggiornamento.

NON VALUTABILE poichè non concesso.

Fondatore e consulente scientifico della Start-Up PorousInks Technologies.

VALUTABILE

6. *relatore a congressi e convegni nazionali e internazionali:*

1. Materials Research Society® fall meeting. Boston, USA, December 2019. Orale Carlos Franco Pujante, *"Synthesis of COF and MOF Colloids in Confined Bioinspired Conditions"*.

VALUTABILE

2. International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC), Lecce, Italy, June 2019. Poster: Carlos Franco, D. Rodríguez, S. Sevim, A. J. deMello, F. Zamora, J. Puigmartí- Luis, *"Synthesis and processing of Porous crystalline Materials (COFs and MOFs) in Microfluidics Conditions"*.

VALUTABILE

3. Zing Conference on Organic Semiconductors, Dubrovnik, Croatia, September 2016. Poster: Paula Mayorga Burrezo, Carlos Franco, Vega Lloveras, Rubén Caballero, Isaac Alcón, Stefan Bromley, Marta Mas-Torrent, Fernando Langa, Juan T. López Navarrete, Concepció Rovira, Jaume Veciana, Juan Casado, *"Camouflaged Holes Assist Negative Charge Motion in Radical-Anion Molecular Wires"*.

VALUTABILE

4. Novena Trobada de Joves Investigadors dels Països Catalans, Perpignan, France, February 2016. Orale: Carlos Franco Pujante, *"Transport properties through organic free radicals"*.

VALUTABILE

5. Organic Electronic Meeting (ORGI), Barcelona, Spain, November 2015. Orale: Carlos Franco Pujante, *"Transport properties through organic molecule based on poly-chlorinated triphenylmethyl radicals"*.

VALUTABILE

6. 13th European Conference of Molecular Electronics (ECME), Strasbourg, France, September 2015. Poster: C. Franco, N. Crivillers, R. Frisenda, R. Gaudenzi, M. Mas-Torrent, Li Yuan, C. A. Nijhuis, S. T. Bromley, E. Burzurí, H. S. J. van der Zant, C. Rovira, J. Veciana, *"Molecular electronic devices based on stable organic free radicals"*.

VALUTABILE

7. Annual Meeting of Doctoral Students in Materials Science at the UAB, Barcelona, Spain, June 2015. Orale : Carlos Franco Pujante, *"Transport properties through organic molecule based on Poly-chlorinated triphenylmethyl radicals"*.

VALUTABILE

8. International Workshop on Organic and Graphene Electronics and Spintronics, Barcelona, Spain, June 2015. Poster: C. Franco, N. Crivillers, R. Frisenda, R. Gaudenzi, M. Mas-Torrent,

Li Yuan, C. A. Nijhuis, S. T. Bromley, E. Burzurí, H. S. J. van der Zant, C. Rovira, J. Veciana, "Molecular electronic devices based on stable organic free radicals".

VALUTABILE

9. 11th International Symposium on Functional p-electron Systems (FPI-11), Arcachon, France, June 2013. Poster: Carlos Franco Pujante, Antonio Caballero, Marta Mas-Torrent, Pedro Molina, Jaume Veciana, Concepció Rovira, "Fluorescence electrochemical switch based on an organic radical-pyrene dyad and triad".

VALUTABILE

10. European School of Molecular Nanoscience, Cuenca, Spain, November 2012. Orale: Carlos Franco Pujante, "Intramolecular Electron Transfer in a Mixed-Valence Di-Thiophene-Vinylene Polychlorinated Bis(Triphenylmethyl) Radical-Anion".

VALUTABILE

11. 4th EuCheMS Chemistry Congress, Prague, Czech Republic, September 2012. Poster: J. Berna Canovas, C. Franco Pujante, M. Alajarin Ceron, "Redox Modulation of the Shuttling Motion in a Tristable [2]Rotaxane".

VALUTABILE

12. VI Workshop on Sensors and Molecular Recognition, Valencia, Spain, June 2012. Poster: J. Berna Canovas, C. Franco Pujante, M. Alajarin Ceron, "Reconocimiento Molecular como descendiente del movimiento de traslación de anillo de [2]Rotaxanos".

VALUTABILE

13. 3rd EuCheMS Chemistry Congress / Chemistry -the Creative Force, Nürnberg, Germany, August, 2010. Poster: J. Berna, M. Alajarín, C. Franco-Pujante, R.-A. Orenes, "Hydrogen bonded molecular shuttles based on azodicarboxamide binding sites".

VALUTABILE

14. 6th Eurasian Meeting on Heterocyclic Chemistry, Alicante Spain, June 2010. Poster: J. Berna, M. Alajarín, R.-A. Orenes, C. Franco-Pujante, "Azodicarboxamides as novel binding motifs for the building of molecular machines".

VALUTABILE

7. *premi e riconoscimenti nazionali e internazionali per attività di ricerca:*

2012-2016 "Junta para la Ampliación de Estudios" Programme JAE Pre-doctoral fellowship on the research project "Organic Free Radicals for Molecular Electronics and Spintronic", funded by The Spanish National Research Council (Consejo Superior de Investigaciones Científicas, CSIC) (48 months).

VALUTABILE

2010-2011 Fellowship for the completion of the Master in Fine and Molecular Chemistry" funded by the Murcia University, (9 months).

VALUTABILE

2009-2010 "Colaboracion Fellowship", funded by the Spanish Ministry of Education (8 months).

VALUTABILE

2016 Poster Prize at Zing Conference on Organic Semiconductors, Dubrovnik, Croatia

VALUTABILE

2015 Poster Prize at 13th European Conference of Molecular Electronics (ECME), Strasbourg, France.

VALUTABILE

8. *attività editoriale e organizzativa:*
non documentata.

VERIFICA PUBBLICAZIONI VALUTABILI

1. *Kondo Effect in a Neutral and Stable All Organic Radical Single Molecule Break Junction.* Ricardo Frisenda, Rocco Gaudenzi, Carlos Franco, Marta Mas-Torrent, Concepció Rovira, Jaume Veciana, Isaac Alcón, Stefan Bromley, Enrique Burzuri, Herre van der Zant. *Nano Letters*, 2015, **15(5)**, 3109-3114.

VALUTABILE

2. *Chemical control over the energy-level alignment in a two-terminal junction.* Li Yuan, Carlos Franco, Núria Crivillers, Marta Mas-Torrent, Liang Cao, C. S. Suchand Sangeeth,

Concepció Rovira, Jaume Veciana, Christian A. Nijhuis. *Nature Communications*, 2016, **7**, 12066.

VALUTABILE

3. *On the operative mechanisms of hole assisted negative charge motion in ground states of radical-anion molecular wires*. Carlos Franco, Paula Mayorga Burrezo, Vega Lloveras, Ruben Caballero, Isaac Alcon, Stefan Bromley, Marta Mas-Torrent, Fernando Langa, Juan T. López Navarrete, Concepció Rovira, Juan Casado, Jaume Veciana, *Journal of the American Chemical Society*, 2017, **139** (2), 686–692.

VALUTABILE

4. *Self-assembled materials and supramolecular chemistry within microfluidic environments: from common thermodynamic states to non-equilibrium structures*. S. Sevim, A. Sorrenti, C. Franco, S. Furukawa, S. Pane A. J. deMello, Puigmartí-Luis, *Chemical Society Reviews*, 2018, **47**, 3788-3803.

VALUTABILE

5. *In-Flow MOF Lithography*. Semih Sevim, Carlos Franco, Hongjun Liu, Hervé Roussel, Laetitia Rapenne, Juan Rubio-Zuazo, Xiang-Zhong Chen, Salvador Pané, David Muñoz-Rojas, Andrew J deMello, Josep Puigmartí-Luis, *Advanced Materials Technologies*, 2019, **4**(6), 1800666.

VALUTABILE

6. *Green synthesis of imine-based covalent organic frameworks in water*. Jesús Á Martín-Illán, David Rodríguez-San-Miguel, Carlos Franco, Inhar Imaz, Daniel Maspoch, Josep Puigmartí-Luis, Félix Zamora, *Chemical Communications*, 2020, **56**(49), 6704-6707.

VALUTABILE

7. *Biomimetic synthesis of sub-20 nm covalent organic frameworks in water*. Carlos Franco, David Rodríguez-San-Miguel, Alessandro Sorrenti, Semih Sevim, Ramon Pons, Ana E Platero-Prats, Marko Pavlovic, Istvan Szilágyi, M Luisa Ruiz Gonzalez, José M González-Calbet, Davide Bochicchio, Luca Pesce, Giovanni M Pavan, Inhar Imaz, Mary Cano-Sarabia, Daniel Maspoch, Salvador Pané, Andrew J De Mello, Felix Zamora, Josep Puigmartí-Luis. *Journal of the American Chemical Society*, 2020, **142**(7), 3540-3547.

VALUTABILE

8. *SERS barcode libraries: A microfluidic approach*. Semih Sevim, Carlos Franco, Xiang-Zhong Chen, Alessandro Sorrenti, David Rodríguez-San-Miguel, Salvador Pané, Andrew J deMello, Josep Puigmartí-Luis, *Advanced Science*, 2020, **7**(12), 1903172.

VALUTABILE

9. *Microfluidic-Assisted Blade Coating of Compositional Libraries for Combinatorial Applications: The Case of Organic Photovoltaics*, Xabier Rodríguez-Martínez, Semih Sevim, Xiaofeng Xu, Carlos Franco, Paula Pamies-Puig, Laura Córcoles-Guija, Romen Rodríguez-Trujillo, Francisco Javier del Campo, David Rodriguez San Miguel, Andrew J deMello, Salvador Pané, David B Amabilino, Olle Inganäs, Josep Puigmartí-Luis, Mariano Campoy-Quiles. *Advanced Energy Materials*, 2020, **10**(33), 2001308.

VALUTABILE

10. *Biodegradable Metal–Organic Framework-Based Microrobots (MOFBOTs)*. Anastasia Terzopoulou, Xiaopu Wang, Xiang-Zhong Chen, Mario Palacios-Corella, Carlos Pujante, Javier Herrero-Martín, Xiao-Hua Qin, Jordi Sort, Andrew J deMello, Bradley J Nelson, Josep Puigmartí-Luis, Salvador Pané, *Advanced Healthcare Materials*, **9**(20), 2001031.

VALUTABILE

11. *CANDYBOTS: A New Generation of 3D-Printed Sugar-Based Transient Small-Scale Robots*. Simone Gervasoni, Anastasia Terzopoulou, Carlos Franco, Andrea Veciana, Norman Pedrini, Jan T Burri, Carmela de Marco, Erdem C Siringil, Xiang-Zhong Chen, Bradley J Nelson, Josep Puigmartí-Luis, Salvador Pané. *Advanced Materials*, **32**(50), 2005652.

VALUTABILE

12. *Synthesis of 2D porous crystalline materials in simulated microgravity*. N. Contreras-Pereda, D. Rodríguez-San-Miguel, C. Franco, S. Sevim, J. Pedro Vale, E. Solano, W-Khay Fong, A. Del Giudice, L. Galantini, R. Pfattner, S. Pané, T. Sotto Mayor, D. Ruiz-Molina, J. Puigmartí-Luis, *Synthesis of 2D porous crystalline materials in simulated microgravity, Adv. Mater.* 2021, **33**(30), 2101777

VALUTABILE

TESI DI DOTTORATO: *Organic Free Radicals for Molecular Electronics and Spintronics*.
NON VALUTABILE poiché la Tesi di Dottorato non è stata allegata alla domanda.

CONSISTENZA COMPLESSIVA DELLA PRODUZIONE SCIENTIFICA:

Il candidato presenta una produzione complessiva pari a N. 23 pubblicazioni internazionali e N. 2 brevetti internazionali.

CANDIDATO: Francesca Anna Scaramuzzo

1. *dottorato di ricerca di ricerca o equipollenti, conseguito in Italia o all'estero:*
PhD in Chemical Sciences (Joint research doctoral thesis project) University of Rome "La Sapienza" (21/12/2009) University of Twente, Enschede, The Netherlands (08/07/2010), con giudizio: ottimo ed altamente meritevole.
VALUTABILE
2. *eventuale attività didattica a livello universitario in Italia e/o all'estero:*
2021/2022. *Chemistry for Nanotechnology* (SSD CHIM-07, 9 CFU, lectures in English for foreign students). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2020/2021. *Chemistry for Nanotechnology* (SSD CHIM-07, 9 CFU, lectures in English for foreign students). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2019/2020. *Chemistry for Nanotechnology* (SSD CHIM-07, 9 CFU, lectures in English for foreign students). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2018/2019. *Chemistry for Nanotechnology* (SSD CHIM-07, 3 CFU, lectures in English for foreign students). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2018/2019. *Chemistry* (SSD CHIM-07, 3 + 3 CFU). Bachelor's degree in Mechanical Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2017/2018. *Advanced Chemistry* (SSD CHIM-07, 3 CFU, lectures in English for foreign students). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2017/2018. *Chemistry* (SSD CHIM-07, 3 + 3 CFU). Bachelor's degree in Mechanical Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2017/2018. *Chemistry and Biochemistry for Biomedical Technologies* (SSD CHIM-07, 3 CFU). Master's degree in Biomedical Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2016/2017. Tutorship activity for *Chemistry* class, SSD CHIM-07, 48 hours. Bachelor's degree in Clinical Engineering, University of Rome "La Sapienza", Rome, Italy.
VALUTABILE
2012/2013. Tutorship activity for *Inorganic Synthesis and Reactivity* class, 25 hours. Master's degree in Industrial Chemistry, University of Padova.
VALUTABILE
2011/2012. Tutorship activity for *Organic Chemistry* class, 25 hours. Bachelor's degree in Chemistry, University of Padova.
VALUTABILE

2011/2012. Tutorship activity for *Organic Chemistry* class, 12 hours. Bachelor's degree in Industrial Chemistry, University of Padova.

VALUTABILE

2011/2012. Tutorship activity for *Organic Chemistry* class, 12 hours. Bachelor's degree in Material Science, University of Padova.

VALUTABILE

24/09/2021. Invited lecture on the topic: *Atomic Force Microscopy: a versatile tool for characterization at the nanoscale*. NanoInnovation 2021 – School of Nanomedicine co-organized with *Istituto Superiore di Sanità*.

VALUTABILE

23/09/2021. Invited lecture on the topic: *Le nanotecnologie nell'industria tessile: dagli smart wearables alla sensoristica integrata*. NanoInnovation 2021 – Corso di aggiornamento professionale dell'Ordine degli Ingegneri di Roma.

VALUTABILE

16/09/2020. Invited lecture on the topic: *Le nanotecnologie nell'industria tessile: dagli smart wearables alla sensoristica integrata*. NanoInnovation 2021 – Corso di aggiornamento professionale dell'Ordine degli Ingegneri di Roma.

VALUTABILE

26/02/2021. Member of Doctoral Degree Examining Board Committee. Universitat de Barcelona, Spain.

VALUTABILE

26/03/2021. Member of Graduation Examining Board Committee. Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.

VALUTABILE

30/10/2020. Member of Graduation Examining Board Committee. Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.

VALUTABILE

2021/2022. Member of the Committee for communication and students orienteering (*Commissione per la gestione della comunicazione e per l'orientamento*, CCOM). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.

VALUTABILE

2021/2022. Member of the Committee for study plans and evaluation of admission requirements (*Commissione per i percorsi formativi degli studenti e per la valutazione dei requisiti di accesso*, CFOR). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.

VALUTABILE

2020/2021. Member of the Committee for communication and students orienteering (*Commissione per la gestione della comunicazione e per l'orientamento*, CCOM). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.

VALUTABILE

2020/2021. Member of the Committee for study plans and evaluation of admission requirements (*Commissione per i percorsi formativi degli studenti e per la valutazione dei requisiti di accesso*, CFOR). Master's degree in Nanotechnology Engineering, University of Rome "La Sapienza", Rome, Italy.

VALUTABILE

3. *documentata attività di formazione o di ricerca presso qualificati istituti italiani o stranieri:*

04/05/2020-Today (contract expiring next 03/05/2023). Fixed-term Assistant Professor (RTD-A, according to Italian Law n. 240/2010) – SSD CHIM/07. Department of Basic and Applied Sciences for Engineering (SBAI), University of Rome "La Sapienza", Rome, Italy.

VALUTABILE

01/03/2019-28/02/2020. Post-doctoral position (Assegno di ricerca, Italian Law n. 240/2010). Department of Basic and Applied Sciences for Engineering (SBAI), University of Rome "La Sapienza", Rome, Italy.

VALUTABILE

01/02/2018-31/01/2019. Post-doctoral position (Assegno di ricerca, Italian Law n. 240/2010) – SSD CHIM/07. Department of Basic and Applied Sciences for Engineering (SBAI), University of Rome “La Sapienza”, Rome, Italy.

VALUTABILE

01/10/2015-30/09/2016. Post-doctoral position (Assegno di ricerca, Italian Law n. 240/2010) – SSD CHIM/07. Department of Basic and Applied Sciences for Engineering (SBAI), University of Rome “La Sapienza”, Rome, Italy.

VALUTABILE

01/06/2013-31/05/2014. Post-doctoral position (Assegno di ricerca, Italian Law n. 240/2010) – SSD CHIM/07. Department of Basic and Applied Sciences for Engineering (SBAI), University of Rome “La Sapienza”, Rome, Italy.

VALUTABILE

01/05/2011-30/04/2013. Post-doctoral position (Assegno di ricerca). Department of Chemical Sciences, University of Padua, Padua, Italy.

VALUTABILE

01/05/2010-30/04/2011. Post-doctoral position (Assegno di ricerca). Department of Chemical Sciences, University of Padua, Padua, Italy.

VALUTABILE

01/05/2017-31/10/2017. Research Fellow (Borsa di studio). Department of Basic and Applied Sciences for Engineering (SBAI), University of Rome “La Sapienza”, Rome, Italy.

VALUTABILE

02/05/2012-29/05/2012. Post-doctoral visiting fellow, Short Term Scientific Mission granted by the COST Action N. CM1005 (Supramolecular Chemistry in Water). Department of Chemistry, Nanoscience Center, University of Jyväskylä, Jyväskylä, Finland.

VALUTABILE

01/06/2014-31/05/2015. Post-doctoral research fellow “Guido Donegani Foundation” for research in Synthetic Organic Chemistry for 2014. Accademia Nazionale dei Lincei.

VALUTABILE

4. *organizzazione, direzione e coordinamento di gruppi di ricerca nazionali e internazionali, o partecipazione agli stessi:*

2020. A preliminary Study Towards A circular Green-use of Eco-friendly barrier masks for SARS-CoV-2 protection: production, use, decontamination, reuse and recycling (STAGES). Progetti Medi di Ateneo, University of Rome “La Sapienza”, Protocol n. RM120172B479E2E8, Investigator

VALUTABILE

2020. Advanced Platform for nanoscale Electrochemical Synthesis and Characterizations based on Atomic Force Microscopy (PESCA) as tool of visualization at high spatial resolution. Grandi Attrezzature Scientifiche, University of Rome “La Sapienza”, Protocol n. GA120173054F048C, Investigator

VALUTABILE

2018. Strain characterization via Tip-enhanced Raman spectroscopy in micro- and nano-Electronic Strain-engineered Systems and devices (STRESS). H2020 Projects – Collaborations, University of Rome “La Sapienza”, Protocol n. PH1181643625A638, Investigator

VALUTABILE

2014. Synthesis of a library of pyrylium-based compounds to be used as DNA intercalating agents. Post-doctoral fellowship for research within the field of Organic Chemistry by *Guido Donegani's Foundation*, Accademia Nazionale dei Lincei, Protocol n. 38/2014/A, Principal Investigator

VALUTABILE

5. *titolarità di brevetti e spin-off/start-up:*

P. Atanasio, F.A. Scaramuzzo, A. Capasso, M. Rossi, M. Pasquali, Elettrodi ibridi carbonio/materiale attivo per accumulatori agli ioni di litio (Hybrid Carbon/active material electrodes for lithium-ion accumulators), *submitted* to the Italian Patent and Trademark Office on 29th June 2021, n. 102021000017024, *under review*.

NON VALUTABILE poiché non ancora concesso.

0/06/2020 – 04/05/2020: President of NanoShare srl.

VALUTABILE

6. *relatore a congressi e convegni nazionali e internazionali:*

Oral communications to Congresses and Schools (Speaker)

1. F.A. Scaramuzzo, M. Fortunato, M. S. Sarto, M. Pasquali, *Study of piezoelectric properties of TiO₂ nanotube arrays via Piezoresponse Force Microscopy (PFM)*, XII Congresso Nazionale AICIng, Reggio Calabria, 5-8- September 2021.

VALUTABILE

2. F.A. Scaramuzzo, M. Ottaviani, E. Gualtieri, A. Dell'Era, M. Pasquali, *Advanced electrodes for Li-ion, Na-ion and Li-S batteries: from recycled materials to nanostructures*, First Italian Workshop on Energy Storage – IWES 2021, online conference, 24-24 February 2021.

VALUTABILE

3. F.A. Scaramuzzo, *Scanning Probe Microscopy Platforms: Morphology and Beyond*, NanoInnovation 2019, Rome, 11-14 June 2019.

VALUTABILE

4. F.A. Scaramuzzo, M. Moreno, A. Santoni, F. Rondino, M. Ottaviani, L. Della Seta, P.P. Proisini, M. Pasquali, *Electrochemical properties of Si-NWs with different morphologies used as anodes for Li-ion batteries*, NanoInnovation 2019, Rome, 11-14 June 2019.

VALUTABILE

5. F.A. Scaramuzzo, C. Paoletti, S. Galli, P.P. Proisini, M. Pasquali, *Synthesis of LiFePO₄ for Li/Li-ion Batteries: a Kilo-Lab Tale*, Eurasia Conference on Chemical Sciences - EuAsCS-15, Rome, 5-8 September 2018 (*invited*).

VALUTABILE

6. M. Pasquali, F.A. Scaramuzzo, A. Dell'Era, G. Tarquini, P. Ballirano, *Phase Transition of TiO₂ Nanotube Arrays: an X-ray Study*, 21st International Conference on Solid State Ionics - SSI 21, Padova, 18-23 June 2017.

VALUTABILE

7. F.A. Scaramuzzo, *Sintesi e Applicazioni di Nanotubi di Titania in forma di Arrays*, Workshop - I primi 5 anni del Laboratorio di Nanotecnologie e Nanoscienze del CNIS University of Rome "La Sapienza", 5 April 2017.

VALUTABILE

8. F.A. Scaramuzzo, M. Pasquali, F. Mura, A. Pozio, A. Dell'Era, A. Curulli, *TiO₂ Nanotubes for Photoelectrocatalytic Water Splitting: an Innovative Cell Design*, 10th European Symposium on Electrochemical Engineering, Chia (CA), 28 September- 2 October 2014.

VALUTABILE

9. F.A. Scaramuzzo, M. Pasquali, F. Mura, A. Dell'Era, *TiO₂ Nanotubes for renewable energy: tuning morphology to tune properties*, Nanoforum – X Edition, Rome, 22-25 September 2014.

VALUTABILE

10. F.A. Scaramuzzo, *Application of tripodal ligands in molecular recognition event*, 2nd Summer Workshop on Supramolecular Functional Materials, Bibione (VE), 22 – 24 May 2013.

VALUTABILE

11. F.A. Scaramuzzo, *Tris-pyridine Ligands as a base for Multimetallic Supramolecular Architectures*, 1st Training School for Young Researchers, CMST COST Action CM1005 Supramolecular Chemistry in Water, Riccione, 16- 19 April 2012.

VALUTABILE

12. F.A. Scaramuzzo, A. González-Campo, C.C. Wu, A. Velders, V. Subramaniam, G. Doddi, P. Mencarelli, M. Barteri, P. Jonkheijm, J. Huskens, *Pyrilium Monolayer: a reactive platform for binding of amines*, XXXIII Convegno Nazionale della Divisione di Chimica Organica della SCI (Co.Di.C.O. 2010), S. Benedetto del Tronto (AP), 12-16 September 2010.

VALUTABILE

13. F.A. Scaramuzzo, A. González-Campo, P. Jonkheijm, P. Mencarelli, G. Doddi, J. Huskens, M. Barteri, *Protein Immobilization on Silica Surface through Self Assembled Monolayers of*

New Pyrylium Salts Derivatives, IX Convegno Nazionale sui Materiali Nanofasici, Iglesias, 3 – 5 June 2009.

VALUTABILE

14. F.A. Scaramuzzo, D. Coletti, L.C. Montemiglio, M. Barteri, *Culture of Skeletal Muscle Cells on Cysteamine Coated Gold Surfaces*, Workshop on Nanomaterial Production, Characterization and Industrial Applications, Milan, 3 December 2008.

VALUTABILE

Poster communications to Congresses and Schools (Presenting author)

1. F.A. Scaramuzzo, G. Licini, C. Zonta, *Combining Dynamic Covalent Interactions with Metal Recognition for the Determination of Amino acids Enantiopurity and Absolute Configuration*, European Winter School on Physic Organic Chemistry (E-WISPOC 2013), Bressanone (Bolzano), 27 January – 1 February 2013 (*Flash communication*);

VALUTABILE

2. F.A. Scaramuzzo, G. Licini, C. Zonta, *Dynamic Combinatorial Libraries for the Synthesis of New Multimetallic Tris(2-pyridylmethyl)amine Architectures*, European Winter School on Physic Organic Chemistry (E-WISPOC 2012), Bressanone (Bolzano), 29 January – 3 February 2012 (*Flash communication*);

VALUTABILE

3. F.A. Scaramuzzo, L. Dovico, G. Licini, C. Zonta, *Towards New Functional Molecular Pincers*, X Congresso Nazionale di Chimica Supramolecolare, Perugia, 25-28 September 2011;

VALUTABILE

4. F.A. Scaramuzzo, G. Licini, C. Zonta, *Towards New Functional Organic Frameworks*, European Winter School on Physic Organic Chemistry (E-WISPOC 2011), Bressanone (Bolzano), 30 January – 4 February 2011;

VALUTABILE

5. G. Gasparini, G. Licini, M. Mba, F.A. Scaramuzzo, C. Zonta, K. Rissanen, M. Cametti, A. Dalla Cort, *Anion Recognition Using Chiral Triphenolamines*, XXXIII Convegno Nazionale della Divisione di Chimica Organica della SCI - Co.Di.C.O. 2010, S. Benedetto del Tronto (AP), 12-16 September 2010;

VALUTABILE

6. F.A. Scaramuzzo, M. Mba, G. Gasparini, C. Zonta, M. Cametti, K. Rissanen, G. Iadevaia, A. Dalla Cort, G. Licini, *Anion Recognition Using Triphenolamines*, Giornate di Chimica Organica Fisica e Meccanicistica - COFEM 2010, Rome, 2 - 4 September 2010;

VALUTABILE

7. M. Mba, F.A. Scaramuzzo, G. Gasparini, C. Zonta, K. Rissanen, M. Cametti, A. Dalla Cort, G. Licini, *Anion Recognition Using Chiral Triphenolamines*, VIII SISOC – Spanish-Italian Symposium on Organic Chemistry, Padova, 3-6 July 2010;

VALUTABILE

8. M. Barteri, G. Doddi, A. Gonzalez-Campo, P. Jonkheijm, J. Huskens, P. Mencarelli, F.A. Scaramuzzo, *Monostrati di Sali di Pirilio come Piattaforma Reattiva per l'Immobilizzazione di Ammine*, Quarto Convegno Giovani Chimici – La Chimica nelle Nanoscienze e nelle Nanotecnologie, Dipartimento di Chimica, Università La Sapienza, Roma, 18 – 19 June 2010;

VALUTABILE

9. F.A. Scaramuzzo, A. Gonzalez Campo, P. Jonkheijm, P. Mencarelli, G. Doddi, J. Huskens, M. Barteri, *New Pyrylium Salts Derivatives as basis of Self Assembled Monolayers for Protein Immobilization on Gold and Silica*, Bionanotechnology II: from Biomolecular Assembly to Applications, Robinson College, Cambridge, United Kingdom, 7 – 9 January 2009;

VALUTABILE

10. F.A. Scaramuzzo, A. Generosi, R. Salvati, A. Latini, B. Paci, V. Rossi Albertini, M. Barteri, *Morphological Study of Acetylcholinesterase on Gold Films for Biosensor Applications*, 2nd EuCheMS Chemistry Congress, Torino, 16 – 20 September 2008;

VALUTABILE

11. 11.Barteri, G. Doddi, P. Mencarelli, F.A.Scaramuzzo, *Self Assembled Monolayers di Sali di Pirilio per la Funzionalizzazione di Superfici di Au e Si con Proteine*, Terzo Convegno Giovani Chimici – La Chimica Sostenibile, Dipartimento di Chimica, Università La Sapienza, Roma, 18 – 19 June 2008 (*Awarded as best poster presentation*);

VALUTABILE

12. F.A. Scaramuzzo, D. Coletti, L.C. Montemiglio, M. Barteri, *Growth and Differentiation of Muscle Cells on Cysteamine Coated Gold Surfaces*, Congresso Nazionale della Divisione di Chimica dei Sistemi Biologici della S.C.I., Montagnana (Padova), 8 – 9 November 2007.

VALUTABILE

7. *premi e riconoscimenti nazionali e internazionali per attività di ricerca:*

2017. Fellowship for participation to the First National Italian School on Chemical Sensors, offered by *Electrochemistry Group (Divisione di Elettrochimica)* of the *Italian Chemical Society*

VALUTABILE

2014. Post-doctoral Fellowship offered by *Guido Donegani's Foundation* for Research within the field of Organic Chemistry for 2014

VALUTABILE

2008. Fellowship for PhD Students performing joint research doctoral thesis projects offered by University of Rome "La Sapienza"

VALUTABILE

2008. *Alessandro D'Aprano Award* offered by *Ordine dei Chimici LUAM*, 3rd Young Chemists Congress, Department of Chemistry, University of Rome "La Sapienza", for best Poster presentation

VALUTABILE

2001. Fellowship offered by *Federazione Nazionale dei Cavalieri del Lavoro* to live in *Collegio Universitario Lamaro-Pozzani* (www.collegiocavalieri.it) and renewed till 2006 on the basis of number of passed exams and obtained marks at University (average of the requested marks 27/30)

VALUTABILE

2001. *Alfieri del Lavoro Award – Medal of the President of the Italian Republic* offered by *Federazione Nazionale dei Cavalieri del Lavoro* on the basis of the results obtained in high school and personally given by the past President of the Italian Republic Carlo Azeglio Ciampi

VALUTABILE

8. *attività editoriale e organizzativa:*

2021. *Lead Guest Editor* for the Special Issue "*Cutting Edge Technologies by Silicon- and Silicon Oxide-Based Nanostructures*" of *Journal of Nanomaterials*

VALUTABILE

2020. *Guest Editor* for the Special Issue "*Exploitation of Multifunctional Nanomaterials for Biological Applications*" of *Molecules*

VALUTABILE

2020. *Guest Editor* for number 2257 "*Nanoinnovation 2019*" of *AIP Conference Proceedings*

VALUTABILE

2019. Member of the Programme Committee of *Nanoinnovation 2019*, Rome, 11-14 June 2019

VALUTABILE

2018. Member of the local Organizing Committee of *Eurasia Conference on Chemical Sciences* (EuAsC2S-15), Rome, 5-8 September 2018

VALUTABILE

2015- today. *Referee* for the international, peer reviewed journals *Appl. Phys. A*, *J. App. Electrochem.*, *AIP Conf. Proc.*, *Colloids and Surfaces A*, *IEEE Trans. Nanotechnol.*, *Materials*

VALUTABILE

VERIFICA PUBBLICAZIONI VALUTABILI

1. *Study of the interaction mechanism between hydrophilic thiol capped gold nanoparticles and melamine in aqueous medium*. S. Cerra, T. Salamone, F. Sciubba, M. Marsotto, C. Battocchio, S. Nappini, F.A. Scaramuzzo, R. Li Voti, C. Sibilia, R. Matassa, A.M. Beltrán, G. Familiari, I. Fratoddi, *Colloids and Surfaces B: Biointerfaces*, 2021, 203, 111727.

VALUTABILE

2. *Insights about the interaction of methotrexate loaded hydrophilic gold nanoparticles: Spectroscopic, morphological and structural characterizations*. S. Cerra, R. Matassa, A.M. Beltrán, G. Familiari, C. Battocchio, I. Pis, F. Sciubba, F.A. Scaramuzzo, A. Del Giudice, I. Fratoddi. *Materials Science and Engineering C*, 2020, 117, 111337.

VALUTABILE

3. *Extending Substrate Sensing Capabilities of Zinc tris(2-pyridylmethyl)amine based Stereodynamic Probe*. F.A. Scaramuzzo, E. Badetti, G. Licini, C. Zonta. *Chirality* 2019, 31, 375 – 383.

VALUTABILE

4. *Integration of graphene onto silicon through electrochemical reduction of graphene oxide layers in non-aqueous medium*. A. G. Marrani, A. C. Coico, D. Giacco, R. Zanoni, F.A. Scaramuzzo, R. Schrebler, D. Dini, M. Bonomo, E.A. Dalchiele. *Applied Surface Science* 2018, 445, 404 – 414.

VALUTABILE

5. *Phase Transition of TiO₂ nanotubes: a X-ray Study as a Function of Temperature*. F.A. Scaramuzzo, A. Dell'Era, G. Tarquini, R. Caminiti, P. Ballirano, M. Pasquali. *Journal of Physical Chemistry C* 2017, 121, 24871 – 24876.

VALUTABILE

6. *Triggering Self-Assembly and Disassembly of a Supramolecular Cage*. C. Bravin, E. Badetti, F.A. Scaramuzzo, G. Licini, C. Zonta. *Journal of the American Chemical Society* 2017, 139, 6456 – 6460.

VALUTABILE

7. *Detection of Stiff Nanoparticles within Cellular Structures by Contact Resonance Atomic Force Microscopy Subsurface Nanomechanical Imaging*. M. Reggente, D. Passeri, L. Angeloni, F.A. Scaramuzzo, M. Barteri, F. De Angelis, I. Persiconi, M.E. De Stefano, M. Rossi. *Nanoscale* 2017, 9, 5671 – 5676.

VALUTABILE

8. *Second-Generation Tris(2-pyridylmethyl)amine–Zinc Complexes as Probes for Enantiomeric Excess Determination of Amino Acids*. F.A. Scaramuzzo, E. Badetti, G. Licini, C. Zonta. *European Journal of Organic Chemistry* 2017, 1438 – 1442.

VALUTABILE

9. *Photoinduced hydrogen evolution with new tetradentate cobalt(II) complexes based on the TPMA ligand*. M. Natali, E. Badetti, E. Deponti, M. Gamberoni, F.A. Scaramuzzo, A. Sartorel, C. Zonta. *Dalton Transactions* 2016, 45, 14764 - 14773

VALUTABILE

10. *Efficient Photocurrent Generation using a Combined Ni-TiO₂ Nanotubes Anode*. F.A. Scaramuzzo, A. Pozio, A. Masci, F. Mura, A. Dell'Era, A. Curulli, M. Pasquali. *Journal of Applied Electrochemistry* 2015, 45, 727 – 733.

VALUTABILE

11. *TiO₂ Nanotubes Photo-anode: an Innovative Cell Design*. F.A. Scaramuzzo, M. Pasquali, F. Mura, A. Pozio, A. Dell'Era, A. Curulli. *Chemical and Engineering Transactions* 2014, 41, 223 – 228.

VALUTABILE

12. *Determination of Amino Acids Enantiopurity and Absolute Configuration: Synergism between Configurationally Labile Metal-based Receptors and Dynamic Covalent Interactions*. F.A. Scaramuzzo, G. Licini, C. Zonta. *Chemistry – A European Journal* 2013, 19, 16809 – 16813.

VALUTABILE

TESI DI DOTTORATO: Functionalization of Inorganic Surfaces: from the Synthesis of New Monolayers to the Immobilization of Biological Material

VALUTABILE

CONSISTENZA COMPLESSIVA DELLA PRODUZIONE SCIENTIFICA:

Il candidato presenta una produzione complessiva pari a N. 32 pubblicazioni internazionali, N. 2

conference papers, N. 2 editoriali e N. 1 capitoli di libro.

Letto, confermato e sottoscritto.

Firma del Commissari

Prof. Pietro Mastrorilli (Presidente).....

Prof. Francesco Delogu (componente).....

Prof.ssa Marta Feroci (Segretario).....