FRANCESCO TASSINARI

CURRICULUM VITAE ET STUDIORUM
(updated 14/09/2022)

Name and Surname: Francesco Tassinari
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EDUCATION

2014 PhD in Sciences and Technologies for Health Products, University of Modena and Reggio Emilia. Thesis Title: *"Biomolecular Functionalized Polythiophenes: Synthesis, Characterization and Applications",* scientific tutors Prof. Luisa Schenetti and Prof. Claudio Fontanesi.

2009 Master Degree in Products, Materials and Processes for the Industrial Chemistry (110/110), University of Bologna. Thesis title: *"Sintesi di silici mesoporose funzionalizzate con derivati organostannici e loro attività catalitica in reazioni di transesterificazione",* scientific tutor Prof. Daniele Caretti.

ACADEMIC AND PROFESSIONAL ACTIVITIES

2022-oggi Fixed-Term Researcher (letter B) at the Department of Chemical and Geological Sciences of the University of Modena and Reggio Emilia

2021 Academic Consultant at the Department of Chemical and Biological Physics of the Weizmann Institute of Science, Rehovot (Israel)

2018-2021 Senior Post-Doc Fellowship at the Department of Chemical and Biological Physics of the Weizmann Institute of Science, Rehovot (Israel), scientific tutor Prof. Ron Naaman

2016-2018 Post-Doc Fellowship at the Department of Chemical and Biological Physics of the Weizmann Institute of Science, Rehovot (Israel), scientific tutor Prof. Ron Naaman

2014-2016 Research Grant at the Department of Chemical and Geological Sciences of the University of Modena and Reggio Emilia. Title: *"Sintesi di polimeri semiconduttori per applicazioni in dispositivi elettronici a base organica",* scientific tutor Prof Adele Mucci

2010 Research Grant at the Department of Physical and Inorganic Chemistry of the University of Bologna. Title: *"Complessi metallo-organici chirali per la catalisi enantioselettiva",* scientific tutor Prof Silvia Bordoni.

RESEARCH INTERESTS

The principal research lines in which Dr. Tassinari is active can be grouped in four macro-areas:

1) *Synthesis and characterization of polymers for molecular electronics*

The research line is articulated in two main branches: on one side, the synthesis and characterization of polymers for optoelectronic devices; on the other, the synthesis and characteriation of chiral polymers for molecular spintronics. The skills acquired during these researches encompass advanced synthetic techniques (chemical reactions in controlled atmosphere and cryogenic temperatures), purification techniques (preparative HPLC and chiral separations) and characterization techniques of polymeric materials (NMR, IR, UV-Vis, CD, GPC, DSC).

2) *Development of new methods for the resolution of racemic mixtures*

The research line is focused on the study of the interactions between chiral molecules and magnetic surfaces, and on the development of technologies to resolve racemic mixtures exploiting these interactions. The adsorption studies of chiral molecules on magnetic substrates is performed through microscopy techniques (AFM, fluorescence microscopy, SEM) and gravimetric techniques (QCM). The study of the resolution of racemic mixtures of conglomerates is done through crystallization experiments on ferromagnetic substrates in the presence of magnetic fields and subsequent characterization of the obtained crystals with optical measurements (polarized microscopy, CD) and crystallography (XRD).

3) Spin-selective electrochemistry

The research line uses spin-polarized electric currents to control electrochemical reactions. The use of spin-polarized currents showed the possibility of obtaining enantioselective reactions on various chemical substrates (enantioselective electrosynthesis) and the possibility of controlling the pathway of certain reactions permitting control over the formation of products with different spin multiplicity (triplet vs singlet). It has also been demonstrated that electrochemical reactions using chiral substrates, for example the electropolymerization of chiral conducting polymers, proceed with different rates as function of the chirality of the reagents and of the spin-polarization of the electric current. These studies are conducted using synthetical and analytical electrochemical techniques using ferromagnetic and/or chiral electrodes.

4) *Studies on the Chiral Induced Spin-Selectivity effect (CISS effect)*

The research line is focused on the study of the property of chiral systems to act as spin-filters. The techniques used to study the effect are many and vary depending on the type of systems that are being probed, which are very diverse in nature. Some of the systems that have been studied are: self-assemble monolayers of molecules with biological interest (DNA, enzymes), molecular motors, porphyrines, supramolecular aggregates, conducting polymers, metal-organic frameworks, metal oxides. The main techniques used are based on the fabrication of devices for the characterization of the electrical properties of the materials (usually prepared through nanofabrication techniques in clean rooms), on conductivity measurements conducted at cryogenic temperatures and under an external magnetic field (magnetoresistance measurements), and on magnetic properties characterization (SQUID). Characterization techniques of thin films like PM-IRRAS, ellipsometry, conductive AFM, SEM, contact angle, surface potential measurements and XPS have been used to characterize the prepared samples and assure their quality.

NATIONAL SCIENTIFIC QUALIFICATION

2020 NATIONAL SCIENTIFIC QUALIFICATION (ASN) for Professor of Second-tier in the disciplinary sector **03/A2**

RESEARCH PROJECTS

2016-2018 European Project: FP7-IDEAS-ERC n° 338720.
Role: Participant in the Weizmann Institute of Science to the project "Chiral Induced Spin Selectivity".

2015 Funding Agent: Fondo di Ateneo per la Ricerca FAR 2015 Unimore
Role: Participant to the project "Oligotiofeni funzionalizzati come materiali per dispositivi fotovoltaici e optoelettronici: sintesi e proprietà"

apr 2013- feb 2014 Funding agent: MSE-ENEA
Role: Participant UNIMORE to the Collaboration Agreement with ENEA for the project "Sintesi e caratterizzazione di nuovi polimeri semiconduttori per celle fotovoltaiche organiche" in the framework of the agreement "Accordo di programma MSE-ENEA - Ricerca di sistema elettrico - Area: produzione di energia elettrica e protezione dell'ambiente - Progetto: Energia elettrica da fonte solare - Ricerca su celle fotovoltaiche innovative"

gen 2011-sett 2012 Funding agent: MSE-ENEA
Role: Participant UNIMORE to the Collaboration Agreement with ENEA for the project "Sintesi di nuovi polimeri a bassa gap per celle fotovoltaiche organiche" in the framework of the agreement "Accordo di programma MSE-ENEA- Ricerca di sistema elettrico - Area: produzione di energia elettrica e protezione dell'ambiente - Progetto: Ricerca su celle fotovoltaiche innovative"

gen 2011-sett 2011 Funding agent: MSE-ENEA
Role: Participant UNIMORE to the Collaboration Agreement with ENEA for the project "Sintesi di polimeri semiconduttori per celle fotovoltaiche organiche" in the framework of the agreement "Accordo di programma MSE-ENEA-Ricerca di sistema elettrico-Area: produzione di energia elettrica e protezione dell'ambiente-Progetto: Ricerca su celle fotovoltaiche innovative"

gen 2011–sett 2012 Funding agent: MIUR (PRIN 2008)
Role: Participant to the research program "Un approccio integrato teorico/sperimentale allo studio dei processi elettrochimici attivi nelle "fuel-cell" ad alcol etilico diretto" Working Unit UNIMORE

TECHNOLOGICAL TRANSFER

2019-2021 Scientific Consultant for the company Kiralis Technology (Israel), active in the research and development of innovative processes for the resolution of chiral compounds.

PATENTS

2021 Patent "ENANTIO-SPECIFIC CRYSTALLIZATION SYSTEM AND METHOD THEREOF"
Publication number : WO/2021/181393
Publication date : 16.09.2021

2020 Patent "A SYSTEM AND METHOD FOR PROMOTING CHEMICAL REACTIONS"
Publication number : WO/2020/084613
Publication date : 30.04.2020

2019 Patent "SYSTEM AND METHOD FOR SEPARATION OF CHIRAL COMPOUNDS USING MAGNETIC INTERACTIONS"
Publication number : WO/2019/043693
Publication date : 07.03.2019

TEACHING ACTIVITIES

2022 Appointed Professor for the *Laboratory of Organic Chemistry II* course for the Bachelor Degree in Chemistry of the University of Modena e Reggio Emilia.

Appointed Professor for the Laboratory of Advanced Organic Chemistry course for the Master Degree in Chemical Sciences of the University of Modena and Reggio Emilia.

THESIS RELATOR/SUPERVISOR

2013 Supervisor for the Master Degree thesis in Pharmacy of Lisa Lambertini

2014 Correlator for the Master Degree thesis in Chemical Sciences of Andrea Copelli

2018 Supervisor of the Visiting Student Jakob Steidel for the project "Enantioseparation by Crystallization Using Magnetic Substrates"

2020 Supervisor of the Master Degree thesis in Chemistry of Sahar Kruk.

2018-2021 Supervisor of PhD students Dr. Eilam Smolinski, Kakali Santra and Borja Rodriguez.

EDITORIAL ACTIVITY

Guest Editor for the journal *Israel Journal of Chemistry*

Guest Editor for the journal *Magnetochemistry*

Peer Reviewer for the following journals:

Applied Sciences
Chemosensors
Coatings
Energies
Nanomaterials
Nanoscale Advances
Polymer Chemistry
Processes
Scientific Reports

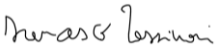
AWARDS AND ACKNOWLEDGEMENTS

2022 Winner of the prize "2022 Materials Chemistry Division Horizon Prize: Stephanie L Kwolek Award" from the Royal Society of Chemistry (UK)
2020 National Scientific Qualification (ASN) II-tier sector 03/A2
2018 Best Poster Winner (Electronic and Magnetic Properties of Chiral Structures and their Assemblies, Telluride, June 2018).
2018 Winner of the Senior Post-Doc Fellowship of the Feinberg Graduate School (Weizmann Institute of Science).
2016 Winner of the Fellowship "Dean Fellowship" of the Feinberg Graduate School (Weizmann Institute of Science)

BIBLIOMETRIC INDICATORS AND SCIENTIFIC PRODUCTION

Total number of publications in scientific journals: **43**
Total number of book chapters: **1**
Total number of citations: **1054** (Scopus)
h-index: **17** (Scopus)

Il sottoscritto dichiara che quanto indicato nella presente domanda corrisponde al vero ai sensi dell'art.46 e 47 D.P.R. 445/2000 ed esprime il proprio consenso affinché i dati personali forniti possano essere trattati nel rispetto del D.lgs n.196/03, e del Regolamento UE n. 2016/679, per gli adempimenti connessi alla presente procedura.

Bologna, 14/09/2022 Signature 

- ATTACHMENT 1 -

PUBLICATIONS IN INTERNATIONAL PEER-REVIEWED SCIENTIFIC JOURNALS

1) Bhowmick, D. K.; Das, T. K.; Santra, K.; Mondal, A. K.; Tassinari, F.; Schwarz, R.; Diesendruck, C. E.; Naaman, R. Spin-Induced Asymmetry Reaction—The Formation of Asymmetric Carbon by Electropolymerization. *Sci. Adv.* **2022**, *8* (32), eabq2727. https://doi.org/10.1126/sciadv.abq2727.

2) Sang, Y.; Tassinari, F.; Santra, K.; Zhang, W.; Fontanesi, C.; Bloom, B. P.; Waldeck, D. H.; Fransson, J.; Naaman, R. Chirality Enhances Oxygen Reduction. *Proc. Natl. Acad. Sci. U.S.A.* **2022**, *119* (30), e2202650119. https://doi.org/10.1073/pnas.2202650119.

3) Das, T.K.; Tassinari, F.; Naaman, R.; Fransson, J. Temperature-Dependent Chiral-Induced Spin Selectivity Effect: Experiments and Theory. *Journal of Physical Chemistry C* **2022**, *126(6)*, 3257–3264. https://doi.org/10.1021/acs.jpcc.1c10550

4) Ko, C.-H.; Zhu, Q.; Tassinari, F.; Bullard, G.; Zhang, P.; Beratan, D. N.; Naaman, R.; Therien, M. J. Twisted Molecular Wires Polarize Spin Currents at Room Temperature. *Proc Natl Acad Sci USA* **2022**, *119* (6), e2116180119. https://doi.org/10.1073/pnas.2116180119.

5) Zhu, Q.; Danowski, W.; Mondal, A.K.; Tassinari, F.; van Beek, C.L.F.; Heideman, G.H.; Santra, K.; Cohen, S.R.; Feringa, B.L.; Naaman, R. Multistate Switching of Spin Selectivity in Electron Transport through Light-Driven Molecular Motors. *Adv. Sci.* **2021**, 2101773. https://doi.org/10.1002/advs.202101773

6) Sang, Y.; Mishra, S.; Tassinari, F.; Karuppannan, S. K.; Carmieli, R.; Teo, R. D.; Migliore, A.; Beratan, D. N.; Gray, H. B.; Pecht, I.; Fransson, J.; Waldeck, D. H.; Naaman, R. Temperature Dependence of Charge and Spin Transfer in Azurin. *J. Phys. Chem. C* **2021**, *125* (18), 9875–9883. https://doi.org/10.1021/acs.jpcc.1c01218.

7) Bhowmick, D.; Sang, Y.; Santra, K.; Halbauer, M.; Capua, E.; Paltiel, Y.; Naaman, R.; Tassinari, F. Simultaneous High-Purity Enantiomeric Resolution of Conglomerates Using Magnetic Substrates. *Crystal Growth & Design* **2021**, *21* (5), 2925–2931. https://doi.org/10.1021/acs.cgd.1c00093.

8) Möllers, P. V.; Ulku, S.; Jayarathna, D.; Tassinari, F.; Nürenberg, D.; Naaman, R.; Achim, C.; Zacharias, H. Spin-selective Electron Transmission through Self-assembled Monolayers of Double-stranded Peptide Nucleic Acid. *Chirality* **2021**, *33* (2), 93–102. https://doi.org/10.1002/chir.23290.

9) Rösch, A. T.; Zhu, Q.; Robben, J.; Tassinari, F.; Meskers, S. C. J.; Naaman, R.; Palmans, A. R. A.; Meijer, E. W. Helicity Control in the Aggregation of Achiral Squaraine Dyes in Solution and Thin Films. *Chem. Eur. J.* **2021**, *27* (1), 298–306. https://doi.org/10.1002/chem.202002695.

10) Amsallem, D.; Bedi, A.; Tassinari, F.; Gidron, O. Relation between Morphology and Chiroptical Properties in Chiral Conducting Polymer Films: A Case Study in Chiral PEDOT. *Macromolecules* **2020**, *53* (21), 9521–9528. https://doi.org/10.1021/acs.macromol.0c01731.

11) Sukenik, N.; Tassinari, F.; Yochelis, S.; Millo, O.; Baczewski, L. T.; Paltiel, Y. Correlation between Ferromagnetic Layer Easy Axis and the Tilt Angle of Self Assembled Chiral Molecules. *Molecules* **2020**, *25* (24), 6036. https://doi.org/10.3390/molecules25246036.

12) Tassinari, F.; Amsallem, D.; Bloom, B. P.; Lu, Y.; Bedi, A.; Waldeck, D. H.; Gidron, O.; Naaman, R. Spin-Dependent Enantioselective Electropolymerization. *J. Phys. Chem. C* **2020**, *124* (38), 20974–20980. https://doi.org/10.1021/acs.jpcc.0c06238.

13) Kashiwagi, K.; Tassinari, F.; Haraguchi, T.; Banerjee-Gosh, K.; Akitsu, T.; Naaman, R. Electron Transfer via Helical Oligopeptide to Laccase Including Chiral Schiff Base Copper Mediators. *Symmetry* **2020**, *12* (5), 808. https://doi.org/10.3390/sym12050808.

14) Kulkarni, C.; Mondal, A. K.; Das, T. K.; Grinbom, G.; Tassinari, F.; Mabesoone, M. F. J.; Meijer, E. W.; Naaman, R. Highly Efficient and Tunable Filtering of Electrons' Spin by Supramolecular Chirality of Nanofiber-Based Materials. *Adv. Mater.* **2020**, *32* (7), 1904965. https://doi.org/10.1002/adma.201904965.

15) Metzger, T. S.; Mishra, S.; Bloom, B. P.; Goren, N.; Neubauer, A.; Shmul, G.; Wei, J.; Yochelis, S.; Tassinari, F.; Fontanesi, C.; Waldeck, D. H.; Paltiel, Y.; Naaman, R. The Electron Spin as a Chiral Reagent. *Angew. Chem. Int. Ed.* **2020**, *59* (4), 1653–1658. https://doi.org/10.1002/anie.201911400.

16) Bloom, B. P.; Lu, Y.; Metzger, T.; Yochelis, S.; Paltiel, Y.; Fontanesi, C.; Mishra, S.; Tassinari, F.; Naaman, R.; Waldeck, D. H. Asymmetric Reactions Induced by Electron Spin Polarization. *Phys. Chem. Chem. Phys.* **2020**, 10.1039.D0CP03129A. https://doi.org/10.1039/D0CP03129A.

17) Blumenschein, F.; Tamski, M.; Roussel, C.; Smolinsky, E. Z. B.; Tassinari, F.; Naaman, R.; Ansermet, J.-P. Spin-Dependent Charge Transfer at Chiral Electrodes Probed by Magnetic Resonance. *Phys. Chem. Chem. Phys.* **2020**, *22* (3), 997–1002. https://doi.org/10.1039/C9CP04681J.

18) Mishra, S.; Marzio, M. di; Giovanardi, R.; Tassinari, F. Magnetoelectrochemistry and Asymmetric Electrochemical Reactions. *Magnetochemistry* **2020**, *6* (1), 1. https://doi.org/10.3390/magnetochemistry6010001.

19) Santra, K.; Zhang, Q.; Tassinari, F.; Naaman, R. Electric-Field-Enhanced Adsorption of Chiral Molecules on Ferromagnetic Substrates. *J. Phys. Chem. B* **2019**, *123* (44), 9443–9448. https://doi.org/10.1021/acs.jpcb.9b07987.

20) Bullard, G.; Tassinari, F.; Ko, C.-H.; Mondal, A. K.; Wang, R.; Mishra, S.; Naaman, R.; Therien, M. J. Low-Resistance Molecular Wires Propagate Spin-Polarized Currents. *J. Am. Chem. Soc.* **2019**, *141* (37), 14707–14711. https://doi.org/10.1021/jacs.9b06142.

21) Tassinari, F.; Steidel, J.; Paltiel, S.; Fontanesi, C.; Lahav, M.; Paltiel, Y.; Naaman, R. Enantioseparation by Crystallization Using Magnetic Substrates. *Chemical Science* **2019**, *10* (20), 5246–5250. https://doi.org/10.1039/C9SC00663J.

22) Ghosh, K. B.; Zhang, W.; Tassinari, F.; Mastai, Y.; Lidor-Shalev, O.; Naaman, R.; Möllers, P.; Nürenberg, D.; Zacharias, H.; Wei, J.; Wierzbinski, E.; Waldeck, D. H. Controlling Chemical Selectivity in Electrocatalysis with Chiral CuO-Coated Electrodes. *The Journal of Physical Chemistry C* **2019**, *123* (5), 3024–3031. https://doi.org/10.1021/acs.jpcc.8b12027.

23) Banerjee-Ghosh, K.; Ben Dor, O.; Tassinari, F.; Capua, E.; Yochelis, S.; Capua, A.; Yang, S.-H.; Parkin, S. S. P.; Sarkar, S.; Kronik, L.; Baczewski, L. T.; Naaman, R.; Paltiel, Y. Separation of Enantiomers by Their Enantiospecific Interaction with Achiral Magnetic Substrates. *Science* **2018**, *360* (6395), 1331–1334. https://doi.org/10.1126/science.aar4265.

24) Tassinari, F.; Jayarathna, D. R.; Kantor-Uriel, N.; Davis, K. L.; Varade, V.; Achim, C.; Naaman, R. Chirality Dependent Charge Transfer Rate in Oligopeptides. *Advanced Materials* **2018**, 1706423. https://doi.org/10.1002/adma.201706423.

25) Zhang, W.; Banerjee-Ghosh, K.; Tassinari, F.; Naaman, R. Enhanced Electrochemical Water Splitting with Chiral Molecule-Coated Fe_3O_4 Nanoparticles. *ACS Energy Letters* **2018**, *3* (10), 2308–2313. https://doi.org/10.1021/acsenergylett.8b01454.

26) Parenti, F.; Tassinari, F.; Libertini, E.; Lanzi, M.; Mucci, A. Π-Stacking Signature in NMR Solution Spectra of Thiophene-Based Conjugated Polymers. *ACS Omega* **2017**, *2* (9), 5775–5784. https://doi.org/10.1021/acsomega.7b00943.

27) Tassinari, F.; Banerjee-Ghosh, K.; Parenti, F.; Kiran, V.; Mucci, A.; Naaman, R. Enhanced Hydrogen Production with Chiral Conductive Polymer-Based Electrodes. *The Journal of Physical Chemistry C* **2017**, *121* (29), 15777–15783. https://doi.org/10.1021/acs.jpcc.7b04194.

28) Mtangi, W.; Tassinari, F.; Vankayala, K.; Vargas Jentzsch, A.; Adelizzi, B.; Palmans, A. R. A.; Fontanesi, C.; Meijer, E. W.; Naaman, R. Control of Electrons' Spin Eliminates Hydrogen Peroxide Formation During Water Splitting. *Journal of the American Chemical Society* **2017**, *139* (7), 2794–2798. https://doi.org/10.1021/jacs.6b12971.

29) Di Nuzzo, D.; Kulkarni, C.; Zhao, B.; Smolinsky, E.; Tassinari, F.; Meskers, S. C. J.; Naaman, R.; Meijer, E. W.; Friend, R. H. High Circular Polarization of Electroluminescence Achieved *via* Self-Assembly of a Light-Emitting Chiral Conjugated Polymer into Multidomain Cholesteric Films. *ACS Nano* **2017**. https://doi.org/10.1021/acsnano.7b07390.

30) Tassinari, F.; Libertini, E.; Parenti, F.; Ballarin, B.; Nicola, F. P. D.; Lanzi, M.; Mucci, A. Polymers with Alkylsulfanyl Side Chains for Bulk Heterojunction Solar Cells: Toward a Greener Strategy. *Macromol. Chem. Phys.* **2017**, *218* (16), 1700111. https://doi.org/10.1002/macp.201700111.

31) Parenti, F.; Ricciardi, R.; Diana, R.; Morvillo, P.; Fontanesi, C.; Tassinari, F.; Schenetti, L.; Minarini, C.; Mucci, A. Polymers for Application in Organic Solar Cells: Bithiophene Can Work Better than Thienothiophene When Coupled to Benzodithiophene. *J. Polym. Sci. Part A: Polym. Chem.* **2016**, *54* (11), 1603–1614. https://doi.org/10.1002/pola.28014.

32) Fontanesi, C.; Tassinari, F.; Parenti, F.; Cohen, H.; Mondal, P. C.; Kiran, V.; Giglia, A.; Pasquali, L.; Naaman, R. New One-Step Thiol Functionalization Procedure for Ni by Self-Assembled Monolayers. *Langmuir* **2015**, *31* (11), 3546–3552. https://doi.org/10.1021/acs.langmuir.5b00177.

33) Mondal, P. C.; Kantor-Uriel, N.; Mathew, S. P.; Tassinari, F.; Fontanesi, C.; Naaman, R. Chiral Conductive Polymers as Spin Filters. *Adv. Mater.* **2015**, *27* (11), 1924–1927. https://doi.org/10.1002/adma.201405249.

34) Tassinari, F.; Mathew, S. P.; Fontanesi, C.; Schenetti, L.; Naaman, R. Electric-Field-Driven Alignment of Chiral Conductive Polymer Thin Films. *Langmuir* **2014**, *30* (16), 4838–4843. https://doi.org/10.1021/la500657e.

35) Morvillo, P.; Diana, R.; Fontanesi, C.; Ricciardi, R.; Lanzi, M.; Mucci, A.; Tassinari, F.; Schenetti, L.; Minarini, C.; Parenti, F. Low Band Gap Polymers for Application in Solar Cells: Synthesis and Characterization of Thienothiophene–Thiophene Copolymers. *Polym. Chem.* **2014**, *5* (7), 2391. https://doi.org/10.1039/c3py01618h.

36) Tassinari, F.; Vanossi, D.; Mucci, A.; Parenti, F.; Fontanesi, C. Regiochemistry in the Electrochemical Assisted Grafting of Glassy Carbon. With Focus on Sterical Hindrance of Lateral Chains in the Electroreduction Process of Multi-Functionalized Bithiophene. *Journal of Electroanalytical Chemistry* **2013**, *710*, 70–75. https://doi.org/10.1016/j.jelechem.2013.04.026.

37) Fontanesi, C.; Camurri, G.; Tassinari, F. On the Co-Adsorption Process of Sodium Dodecyl Sulfate and Sodium Dodecylbenzenesulfonate on a 1-Decanethiol-Functionalized Au Electrode, as a Corrosion Inhibiting Mimic Process. *Journal of Applied Electrochemistry* **2012**. https://doi.org/10.1007/s10800-012-0486-1.

38) Tassinari, F.; Tancini, E.; Innocenti, M.; Schenetti, L.; Fontanesi, C. On the Hybrid Glassy Carbon Electrode/OligoThiophene/Ag(NP) Interface. *Langmuir* **2012**, *28* (44), 15505–15512. https://doi.org/10.1021/la3025777.

39) Vanossi, D.; Benassi, R.; Parenti, F.; Tassinari, F.; Giovanardi, R.; Florini, N.; De Renzi, V.; Arnaud, G.; Fontanesi, C. Functionalization of Glassy Carbon Surface by Means of Aliphatic and Aromatic Amino Acids. An Experimental and Theoretical Integrated Approach. *Electrochimica Acta* **2012**, *75*, 49–55. https://doi.org/10.1016/j.electacta.2012.04.128.

40) Morvillo, P.; Parenti, F.; Diana, R.; Fontanesi, C.; Mucci, A.; Tassinari, F.; Schenetti, L. A Novel Copolymer from Benzodithiophene and Alkylsulfanyl-Bithiophene: Synthesis, Characterization and Application in Polymer Solar Cells. *Solar Energy Materials and Solar Cells* **2012**, *104*, 45–52. https://doi.org/10.1016/j.solmat.2012.04.044.

41) Parenti, F.; Morvillo, P.; Bobeico, E.; Diana, R.; Lanzi, M.; Fontanesi, C.; Tassinari, F.; Schenetti, L.; Mucci, A. (Alkylsulfanyl)Bithiophene-Alt-Fluorene: π-Conjugated Polymers for Organic Solar Cells. *Eur. J. Org. Chem.* **2011**, *2011* (28), 5659–5667. https://doi.org/10.1002/ejoc.201100738.

Il sottoscritto dichiara che quanto indicato nella presente domanda corrisponde al vero ai sensi dell'art.46 e 47 D.P.R. 445/2000 ed esprime il proprio consenso affinché i dati personali forniti possano essere trattati nel rispetto del D.lgs n.196/03, e del Regolamento UE n. 2016/679, per gli adempimenti connessi alla presente procedura.

Bologna, 14/09/2022 Signature

- ATTACHMENT 2 -

BOOK CHAPTERS AND NON-PEER REVIEWED ARTICLES

(1) Parenti, F.; Schenetti, L.; **Tassinari, F.** in *Advances in Asymmetric Autocatalysis and Related Topics*, *Chap.15: Chiral Polythiophenes*, 1st Edition, Editors: Gyula Palyi Robert Kurdi Claudia Zucchi, **2017,** ISBN: 9780128128244.

(2) **Tassinari F.** Stability of Polymer Solar Cells: a Chemical Approach. *La Chimica e l'Industria* **2016**, *1*, 39-42

(3) **Tassinari F.** Chiral Polythiophenes. *La Chimica e l'Industria* **2014**, *5*, 54-55.

Il sottoscritto dichiara che quanto indicato nella presente domanda corrisponde al vero ai sensi dell'art.46 e 47 D.P.R. 445/2000 ed esprime il proprio consenso affinché i dati personali forniti possano essere trattati nel rispetto del D.lgs n.196/03, e del Regolamento UE n. 2016/679, per gli adempimenti connessi alla presente procedura.

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- ATTACHMENT 3 -

CONTRIBUTIONS PRSENTED AT NATIONAL AND INTERNATIONAL CONGRESSES

(in bold the contributions given in person**, underlined** the invited contributions**)**

(1) From 2D to 3D Crystals: A Multi-Scale, Multi-Technique and Multi-System Approach of the Crystallization of Organic Molecules on Tailored Carbon Surfaces, Bruxelles, Marzo 2022.
Invited Talk: *Spin-polarized surfaces as resolving agents for enantiomeric resolutions.*
Tassinari, F.

(2) International Conference on Porphyrins and Phthalocyanine (ICPP-11), Conferenza Virtuale, Giugno 2021.
Invited Talk: *Chirality and Electron Spin Polarization – A New Approach Towards Spin Controlled Chemistry.*
Tassinari F., Naaman, R.

(3) Chirality 2019, Bordeaux, Luglio 2019.
Oral Contribution: *Enantioselective Reduction of Camphorsulphonic Acid Using a Spin-polarized Electrode.*
Tassinari F., Mishra S., Naaman R.

(4) 258th American Chemical Society National Meeting & Expo, San Diego, Agosto **2019**.
Oral Contribution: *Chiral, low-resistance organic and nanoscale frameworks that uniquely propagate spin polarized currents*.
Bullard G., Tassinari F., Ko C.H., Mishra S., Mondal A., Wang R., Naaman R., Therien M.

(5) American Chemical Society Spring 2019 National Meeting & Expo, Orlando, Aprile 2019.
Oral Contribution: *Enantiospecific interactions between chiral molecules and magnetic surfaces.*
Tassinari F., Banerjee-Gosh K., Mishra S., Naaman R., Paltiel Y.

(6) 18th International Chromatography Congress, Istanbul, Novembre 2018.
Invited Talk: *Enantiospecific interactions between chiral molecules and magnetic surfaces.*
Tassinari F., Banerjee-Gosh K., Paltiel Y., Naaman R.

(7) 34th European Conference on Surface Science (ECOSS34), Aarhus, Agosto **2018**.
Oral Contribution: *Chirality-induced spin selectivity in electron transmission through self-assembled layers of PNA*.
Möllers P., Nürenberg D., Kettner M., Tassinari F., Markus T., Ulku S., Achim C., Naaman R., Zacharias H.

(8) Electronic and Magnetic Properties of Chiral Structures and their Assemblies, Telluride, Giugno 2018.
Poster Contribution: *Electron's Spin-Controlled Enzymatic Activity of Laccase*
Tassinari F., Ogikubo Y., Cohen H., Varade V., Haraguchi T., Akitsu T., Naaman R.

(9) 255th American Chemical Society National Meeting & Exposition, New Orleans, Marzo 2018.
Poster Contribution: *Separation of chiral molecules by enantio-specific interactions using magnetic surfaces.*
Capua E., Banerjee-Ghosh K., Tassinari F., Ben Dor O., Yochelis S., Paltiel Y., Naaman R.

(10) 255th American Chemical Society National Meeting & Exposition, New Orleans, Marzo 2018. Poster Contribution: *Spin-controlled electrochemistry using chiral electrodes: Effects on water electrolysis.*
Tassinari F., Mtangi W., Banerjee-Ghosh K., Adelizzi B., Parenti F., Vankayala K., Palmans A., Jentzsch A.V., Fontanesi C., Mucci A., Meijer E.W., Naaman R.

(11) European Conference on Molecular Spintronics (ECMolS) 2016, Bologna, Novembre 2016.
Oral Contribution: *PNAs and oligopeptides' self-assembled monolayers as spin filters*. Tassinari F., Kantor-Uriel N., Varade V., Ulku S., Jayarathna D., Achim C., Naaman R.

(12) XLV National Congress on Magnetic Resonance, Modena, Settembre **2016**.
Oral Contribution: *Conjugated Polymers for Photovoltaics: from Solution to Solid-State NMR.*
Mucci A., Parenti F., Libertini E., Tassinari F., Schenetti L.

(13) ENERCHEM 1, Firenze, Febbraio **2016**.
Oral Contribution: *Conjugated Polymers for Solar Cells Incorporating the Dithienosilole Unit*.
Parenti F., Tassinari F., Cugini A., Schenetti L., Morvillo P., Ricciardi R., Mucci A.

(14) ENERCHEM 1, Firenze, Febbraio 2016.
Poster Contribution: *Poly(Cyanovinylene Phenylene-Co-Thiophene)s For Polymer Solar Cells*.
Tassinari F., Parenti F., Di Nicola F.P., Ballarin B., Lanzi M., Libertini E., Mucci A.

(15) XXXVI Convegno della Divisione di Chimica Organica della Società Chimica Italiana, Bologna, Settembre **2015**.
Oral Contribution: *Characterization of Conducting Polymers for Organic Solar Cells.*
Parenti F., Tassinari F., Fontanesi C., Schenetti L., Morvillo P., Ricciardi R., Diana R., Minarini C., Lanzi M., Mucci A.

(16) XXXVI Convegno della Divisione di Chimica Organica della Società Chimica Italiana, Bologna, Settembre **2015**.
Oral Contribution: *Synthesis of Low Band-Gap Conjugated Polymers for Application in Solar Cells.*
Libertini E., Morvillo P., Mucci A., Tassinari, F., Schenetti L., Parenti F.

(17) European Training School and Conference on Organic Photovoltaic Stability, Cargese, Giugno 2015.
Oral Contribution: *Synthesis and characterization of copolymers containing the (alkylsulfanylthiophene)substituted benzodithiophene unit and their application in organic solar cells*.
Parenti F., Ricciardi R., Diana R., Fontanesi C., Mucci A., Tassinari F., Schenetti L., Minarini C., Morvillo P.

(18) European Polymer Federation Conference (EUPOC) 2015, Gargnano, Maggio 2015
Oral Contribution: *Chiral Conductive Polymers as Spin Filters.*
Tassinari F., Parenti F., Mondal C. P., Kantor-Uriel N., Mathew P. S., Naaman R., Fontanesi C., Schenetti L., Mucci A.

(19) 2015 Fotonica AEIT Italian Conference on Photonics Technologies, Torino, Maggio **2014**.
Poster Contribution: *Performance of Polymer Solar Cells with (Alkylsulfanyl)Bithiophene Copolymers*.
Ricciardi R., Morvillo P., Diana R., Minarini C., Mucci A., Parenti F., Tassinari F., Schenetti L.

(20) SAYCS 2014- Young Chemists Symposium 14th Edition, Riccione, Ottobre **2014**.
Oral Contribution: *Synthesis and characterization of an organic co-polymer for photovoltaic application*.
Copelli, A.; Tassinari F., Mucci A., Parenti F.

(21) XXV Congresso della Società Chimica Italiana, Arcavacata di Rende, Settembre 2014.
Oral Contribution: *Effect of the Electric Field on the Structure of a Chiral Conductive Polymer Thin Film.*
Tassinari F., Mathew S., Parenti, F., Fontanesi, C., Schenetti, L., Naaman, R.; Mucci A.

(22) XXV Congresso della Società Chimica Italiana, Arcavacata di Rende, Settembre 2014.
Poster Contribution: *Polymer Solar Cells based on Benzodithiophene copolymers.*
Parenti F., Diana R., Fontanesi C., Minarini C., Ricciardi R., Schenetti L., Tassinari F., Mucci A.

(23) Electronic and Magnetic Properties of Chiral Structures and their Assemblies, Telluride, Luglio 2014
Oral Contribution: *Electric field effect on the solid structure of a Chiral Polythiophene.*
Tassinari F., Mathew S., Parenti, F., Fontanesi, C., Schenetti, L., Naaman, R.; Mucci A.

(24) 10th International Conference on Organic Electronics, Modena, Giugno 2014.
Poster Contribution: *Synthesis of Low Band-Gap Thiophene-Based Copolymers: New Donor Material Candidates in Organic Solar Cells*.
Parenti F., Morvillo P., Diana R., Ricciardi R., Minarici C., Fontanesi C., Mucci A., Copelli A., Schenetti L, Tassinari F.

(25) Giornata della Chimica dell'Emilia Romagna, Bologna, Dicembre 2013.
Poster Contribution: *Synthesis and properties of new bio-functionalized polythiophenes*.
Tassinari F., Fontanesi C., Mucci A., Schenetti L.

(26) SAYCS 2013, Riccione, 28-30 ottobre 2013
Oral Contribution: *Study of the electric field alignment of a chiral polythiophene.*
Tassinari F., Mathew S., Parenti, F., Fontanesi, C., Schenetti, L., Naaman, R.

(27) Giornate dell'Elettrochimica Italiana 2013, Pavia, 22-27 Settembre 2013
Oral Contribution: *Electric field alignment of chiral conductive polymers.*
Tassinari F., Mathew S., Parenti, F., Fontanesi, C., Schenetti, L., Naaman, R.

(28) Giornata della Chimica dell'Emilia Romagna, Ferrara, Dicembre 2012.
Poster Contribution: *Chiral Polythiophenes: a promising material for the study of the Chiral Induced Spin Selectivity*.
Tassinari F., Matthew S., Parenti F., Schenetti L., Naaman R.

(29) 27th European Photovoltaic Solar Energy Conference and Exhibition, Strasburgo, Settembre **2012**.
Poster Contribution: *Low Bandgap Copolymers with (Alkylsulfanyl)Bithiophene Unit for Efficient Polymer Solar Cells*.
Morvillo P., Parenti F., Diana R., Bobeico E., Mucci A., Tassinari F., Schenetti L., Minarini C.

(30) Trento Innovation Conferences on Materials Engineering (TICME) 2011, Trento, Dicembre 2011.
Poster Contribution: *Organic Materials for Photovoltaics: Synthesis and Electrochemical Behaviour of a Thiophene Based Copolymer*.

Parenti F., Diana R., Fontanesi C., Morvillo P., Mucci A., Schenetti L., Tassinari F.

(31) XXIV Congresso Nazionale della Società Chimica Italiana, Lecce, Settembre **2011**.
Poster Contribution: *Substrates for Energy Devices*.
Foresti M.L., Ardizzone S., Bencistà I., Fontanesi C., Innocenti M., Lavacchi A., Locatelli C., Marcaccio M., Minguzzi A., Loglio F., Parenti F., Rondinini F., Tassinari F., Vizza F.

(32) **ElecNANO 4 – ECHEMS 7, Parigi, Maggio 2011**.
Poster Contribution: *Preparation and characterization of bithiophene modified Si(1,1,1) electrodes.*
Tassinari F., Fontanesi C., Mucci A., Parenti F., Schenetti L.

Il sottoscritto dichiara che quanto indicato nella presente domanda corrisponde al vero ai sensi dell'art.46 e 47 D.P.R. 445/2000 ed esprime il proprio consenso affinché i dati personali forniti possano essere trattati nel rispetto del D.lgs n.196/03, e del Regolamento UE n. 2016/679, per gli adempimenti connessi alla presente procedura.

Bologna, 14/09/2022 Signature