



PROF. DR. FERNANDO D. STEFANI

Born in Buenos Aires, November 19th, 1975. Married, 4 sons
fernando.stefani@df.uba.ar
www.stefani-lab.ar

Born and raised in Buenos Aires, after graduating with honors in Materials Engineering (2001, Buenos Aires), Fernando Stefani obtained a summa cum laude Ph.D. in Chemistry (2004, Mainz, Germany), for which he obtained the Otto Hahn Medal of the Max-Planck-Society. After a postdoctoral stay at the Institute of Photonics Sciences in Castelldefels (Barcelona, Spain), and a period as Assistant Professor at the Faculty of Physics of the Ludwig-Maximilians University of Munich (Germany), he returned to Buenos Aires (2009) to take positions as Professor of Experimental Physics at the University of Buenos Aires and scientific member of the National Scientific and Technical Research Council (CONICET). During his career, he was mentored by excellent scientists such as Wolfgang Knoll, Niek van Hulst, Jochen Feldmann, Theo Lasser, and Stefan W. Hell, among others. Since his return to Buenos Aires, Prof. Stefani has established an internationally competitive lab that is a regional reference in nanophotonics and super-resolution microscopy, where more than 20 young researchers have had the chance to start their own careers in research or high-tech companies.

Buenos Aires, June 6th, 2023

Current positions

Professor of Experimental Physics, Faculty for Exact and Natural Sciences, University of Buenos Aires
Principal Investigator, National Scientific and Technical Research Council (CONICET), Argentina
Director, Center for Bionanoscience Research (CIBION-CONICET), Buenos Aires, Argentina

Areas of interest

Photophysics of single molecules and nanoparticles
Biological imaging
Biosensing
Supramolecular structures
Hybrid nano-bio-systems
Nanophotonics and plasmonics

Methods

Single-molecule spectroscopy
Super-resolution fluorescence microscopy
Time-resolved optical spectroscopy
Optical and photothermal manipulation
Single-molecule (particle) tracking
Numerical simulations

University teaching & research

- 10.2019 – present Full Professor of Experimental Physics
Faculty for Exact and Natural Sciences, Department of Physics
University of Buenos Aires, Argentina
- 10.2009 – 09.2019 Associate Professor of Experimental Physics
Faculty for Exact and Natural Sciences, Department of Physics
University of Buenos Aires, Argentina
- 03.2008 – 09.2009 Assistant Professor (Akademischer Rat auf Zeit)
Faculty of Physics, Chair of Prof. Dr. Jochen Feldmann
Ludwig-Maximilians-University Munich, Germany

Research

- 12.2016 – present Principal Investigator
National Scientific and Technical Research Council (CONICET), Argentina
- 04.2011 – 04.2016 Leader of a Max Planck Partner Group in association with Prof. Stefan W. Hell
- 12.2012 – 11.2016 Independent Investigator
National Scientific and Technical Research Council (CONICET), Argentina
- 10.2009 – 11.2012 Associate Investigator
National Scientific and Technical Research Council (CONICET), Argentina
- 04.2006 – 02.2008 Postdoc in the group of Prof. Dr. Niek van Hulst
Institute of Photonic Sciences (ICFO)- Barcelona, Spain
- 04.2006 – 02.2008 Postdoc in the group of Prof. Dr. Wolfgang Knoll
Max-Planck-Institut für Polymerforschung- Mainz, Germany

Management

- 06.2022 – present Member of the Executive Board
Fundación Argentina de Nanotecnología
- 03.2022 – present Director
Center for Bionanoscience Research (CIBION- CONICET), Buenos Aires, Argentina
- 02.2022 – presente Member of the Editorial Advisory Board
ACS Photonics
- 03.2021 – presente Member of the Executive Board of the *Asociación Argentina para el Progreso de las Ciencias (AAPC)*, Buenos Aires, Argentina
- 07.2013 – 02.2022 Deputy Director
Center for Bionanoscience Research (CIBION- CONICET), Buenos Aires, Argentina

Public policy

- 06.2022 – present
 Advisor to the President of the Science and Technology Commission
 Chamber of Deputies, Office of Deputy Dr. Facundo Manes
 National Congress of Argentina
- 05.2016 – 12.2019
 Advisor to the President of the Science and Technology Commission
 Chamber of Senators, Office of Senator Omar Perotti
 National Congress of Argentina

Ph. D. (Chemistry)

- 07.2001 – 07.2004
 “Confocal microscopy applied to the study of single entity fluorescence and light scattering”
 Max-Planck-Institut für Polymerforschung & Johannes Gutenberg Universität
 Mainz, Germany. Director: Prof. Dr. Wolfgang Knoll
 summa cum laude

Education

- 07.1997 – 06.2001
 Materials Engineering- graduated with the highest honors
 Instituto de Tecnología Prof. Jorge Sabato
 Universidad Nacional de Gral. San Martín – Buenos Aires, Argentina
 Thesis: “Detection and study of DNA surface hybridization reactions by surface plasmon resonance techniques”. Directors: Prof. Dr. Wolfgang Knoll, Prof. Dr. Ana María Llois
- 02.1995 – 06.1997
 Chemical Engineering
 Universidad Tecnológica Nacional- Buenos Aires, Argentina
- 02.1989 – 12.1994
 Electromechanical technician
 Instituto Tecnológico Philips Argentina- Buenos Aires, Argentina

Honors & Awards

- 2023
 Konex Award 2012-2022 on Nanoscience and Analytical Chemistry
- 2018
 Houssay Prize in Mathematics, Physics, Astronomy, and Computation
 Ministry of Science, Technology and Innovation, Argentina
- 2018
 Distinction for Academic Excellence
 University of Buenos Aires, Argentina
- 2017
 Georg Foster Research Award
 Alexander von Humboldt Foundation, Germany
- 2017
 Innovar Award for Innovation at Universities
 Ministry of Science, Technology and Innovation, Argentina

2015	Distinction for Academic Excellence University of Buenos Aires, Argentina
2015	Mercator Fellowship Deutsche Forschungsgemeinschaft (DFG), Germany
2014	Innovar Award for Applied Research Ministry of Science, Technology and Innovation, Argentina
2014	Young Investigator Award in Physics National Academy of Exact, Physical and Natural Sciences, Argentina
2012, 2010 y 2009	Publication Award Center For Nanoscience (CeNS), Munich, Germany
2005	Otto Hahn Medal Max Planck Society, Germany

Languages

Spanish: native English: reads, speaks, and writes German: reads, speaks

Training and mentoring young researchers

Current direction of Luciana Martínez (Physics), Santiago Sosa (Biochemistry), Florencia Choque (Physics),

PhD candidates Gonzalo Escalante (Physics), Florencia Edorna (Physics)

Assistant researchers Dr. Ianina Violi (co-directed with Prof. Dr. Galo Soler Illia)
Dr. Julián Gargiulo (co-directed with Prof. Dr. Galo Soler Illia)

Alumni

Dr. Fernando Diaz Optical Engineer at Baraja Pty Ltd., New South Wales, Australia
 Dr. Jesica Pellegrotti Assistant Professor, National University of Comahue, Neuquén, Argentina
 Dr. Yanina Álvarez Postdoc at National University of Singapore, Singapore
 Dr. Eduardo Perassi Assistant Professor at National University of Córdoba, Córdoba, Argentina
 Dr. Emiliano Cortés Professor (W2), Nano Institute, Ludwig-Maximilians-University Munich, Germany
 Dr. Martín Bordenave Satellite Optical Integration Engineering at Satellogic, Buenos Aires, Argentina
 Dr. Julián Gargiulo Researcher at National University of San Martín, Buenos Aires, Argentina
Giambiagi Award of the Argentine Physics Association to the best doctoral thesis on experimental Physics 2016-2017.
 Dr. Federico Barabas Associate Data Scientist at Spotify, Stockholm, Sweden
 Dr. Rodrigo Ponzio Postdoc at National University of Río Cuarto, Córdoba, Argentina
 Andrés Benassi Geophysicist at Total, Houston, Texas, USA
 Alfredo Sánchez Postdoc at Institute of Photonic Sciences (ICFO), Barcelona, Spain
 Santiago Cerrotta Ph.D. candidate, National Technological University, Campana, Buenos Aires, Argentina

Bruno Scocozza	Ph.D. candidate, Max-Planck-Institute of Molecular Physiology, Dortmund, Germany
Germán Chiarelli	Ph.D. candidate, University of Fribourg, Fribourg, Switzerland
Robin Puchert	Ph.D. candidate, University of Regensburg, Regensburg, Germany
Dr. Ianina Violi	Researcher at National University of San Martin, Buenos Aires, Argentina
Dr. Romina Landa	Software developer at Collective.ai, Buenos Aires, Argentina
Dr. Luciano Masullo	Postdoc at Max Planck for Biochemistry, Munich, Germany Giambiagi Award of the Argentine Physics Association to the best doctoral thesis on experimental physics 2020-2021.
Dr. Alan Szalai	Postdoc at Ludwig-Maximilians University, Munich, Germany
Fernando Caprile	Jr. Developer, Iquall Networks, Buenos Aires, Argentina
Dr. Cecilia Zaza	Postdoc, University College London, UK

Visiting Professor

03.2018, 05.2019, 09.2022	Ludwig-Maximilians-University Munich, Germany Host: Prof. Dr. Philip Tinnefeld
05.2019, 05.2022, 04.2023	University of Fribourg, Switzerland Host: Prof. Dr. Guillermo P. Acuna
07.2017, 09.2015, 07.2012	Technical University of Braunschweig, Germany Host: Prof. Dr. Philip Tinnefeld
07.2013, 03.2012, 04.2021	MPI for Biophysical Chemistry, Göttingen, Germany Host: Prof. Dr. Stefan W. Hell
10.2014	University of California at Berkeley (USA) Host: Prof. Dr. Carlos Bustamante

Publications

stefani-lab.ar/publications/

75 peer-reviewed publications in international journals

[Google scholar metrics](#) h-index: 38 Total citations > 7100

[Scopus Metrics](#) h-index: 34 Total citations > 5300

2023	Fiona Cole, Jonas Zähringer, Johann Bohlen, Tim Schröder, Florian Steiner, Fernando D. Stefani, Philip Tinnefeld
82	“Super-Resolved FRET and Co-Tracking in pMINFLUX” Submitted
81*	Fernando D. Stefani “Tracking nanoscopic motion with minima of light” Nature Photonics – accepted
80	Julian Gargiulo, Matias Herran, Ianina L. Violi, Ana Sousa-Castillo, Luciana P. Martinez, Simone Ezendam, Mariano Barella, Helene Giesler, Roland Grzeschik, Sebastian Schlücker, Stefan A. Maier, Fernando D. Stefani, Emiliano Cortes “Single particle thermometry in bimetallic plasmonic nanostructures” Nature Communications – accepted

- 79* Cecilia Zaza, Germán Chiarelli, Ludovit P. Zweifel, Mauricio Pilo-Pais, Evangelos Sisamakís, Fernando D. Stefani, Guillermo P. Acuna
 “Super-resolved FRET imaging by confocal fluorescence-lifetime single-molecule localization microscopy”
Small Methods (2023) 2201565
- 78 Luciana P. Martínez, Santiago Poklepovich-Caride, Julian Gargiulo, Eduardo D. Martínez, Fernando D. Stefani, Paula C. Angelomé, Ianina L. Violi
 “Optical Printing of Single Au Nanostars”
Nano Letters 23 (2023) 2703-2709
- 77* Lucía F. Lopez, Luciano A. Masullo, Alan M. Szalai, Florencia Edorna, Florencia D. Choque, Fernando Caprile, Fernando D. Stefani
 “Optimization and characterization of toroidal foci for super-resolution fluorescence microscopy: a tutorial”
Journal of the Optical Society of America B 40 (2023) C103-C110
- 2022
 76* Piotr Zdańkowski, Lucía F. Lopez, Guillermo P. Acuna, Fernando D. Stefani
 “Nanometer resolution imaging and tracking of single fluorophores by sequential structured illumination”
ACS Photonics 9 (2022) 3777–3785
- 75* Aleksandra K. Adamczyk, Teun A.P.M. Huijben, Miguel Sison, Andrea di Luca, Germán Chiarelli, Stefano Vanni, Sophie Brasselet, Kim I. Mortensen, Fernando D. Stefani, Mauricio Pilo-Pais, and Guillermo P. Acuna
 “DNA self-assembly of single molecules with deterministic position and orientation”
ACS Nano 16 (2022) 16924–16931
- 74* Fangjia Zhu, María Sanz-Paz, Antonio I. Fernández-Domínguez, Xiaolu Zhuo, Luis M. Liz-Marzán, Fernando D. Stefani, Mauricio Pilo-Pais, and Guillermo P. Acuna
 “DNA-Templated Ultracompact Optical Antennas for Unidirectional Single-Molecule Emission”
Nano Letters 20 (2022) 6402–6408
- 73* Luciano A. Masullo, Alan M. Szalai, Lucía F. Lopez, Mauricio Pilo-Pais, Guillermo P. Acuna, and Fernando D. Stefani
 “An alternative to MINIFLUX that enables nanometre resolution in a confocal microscope”
Light: Science & Applications 11 (2022) 199
- 72* Luciana P. Martínez, Julian Gargiulo, Mariano Barella, Ianina L. Violi, Fernando D. Stefani
 “Fine tuning the optical properties of single Au nanoparticles by plasmon-driven growth in closed-loop control”
Advanced Optical Materials 10 (2022) 2102724
- 71* Luciano A. Masullo & Fernando D. Stefani
 “Multiphoton single-molecule localization by sequential excitation with light minima”
Light: Science & Applications 11 (2022) 70
- 70* Fernando Caprile, Luciano A. Masullo, Fernando D. Stefani
 “PyFocus – a Python package for vectorial calculations of focused optical fields under realistic conditions. Application to toroidal foci.”
Computer Physics Communications 275 (2022) 108315
- 69* Ianina L. Violi, Luciana P. Martínez, Mariano Barella, Cecilia Zaza, Lukáš Chvátal, Pavel Zemánek, Marina V. Gutiérrez, María Y. Paredes, Alberto F. Scarpellini, Jorge Olmos-Trigo, Valeria R. Pais, Iván Díaz Nóbrega, Emiliano Cortes, Juan José Sáenz, Andrea V. Bragas, Julian Gargiulo, Fernando D. Stefani
 “Challenges on Optical Printing of Colloidal Nanoparticles”
Journal of Chemical Physics 156 (2022) 034201
- 68* Luciano A. Masullo, Lucía F. Lopez, Fernando D. Stefani
 “A common framework for single-molecule localization using sequential structured illumination”
Biophysical Reports 2 (2022) 100036

- 67* Luciano A. Masullo, Alan M. Szalai, Lucía F. Lopez, Fernando D. Stefani
 "Fluorescence nanoscopy at the sub-10 nm scale"
Biophysical Reviews 13 (2022) 1101-1112
- 2021
 66* Alan M. Szalai, Cecilia Zaza, Fernando D. Stefani
 "Super-resolution FRET measurements"
Nanoscale 13 (2021) 18421 - 18433
- 65 Rodrigo A. Ponzio, Ramiro M. Spada, Ana B. Wendel, M. Virginia Forcone, Fernando D. Stefani, Carlos A. Chesta, Rodrigo E. Palacios
 "Exciton diffusion, antenna effect and quenching defects in superficially dye doped conjugated polymer nanoparticles"
Journal of Physical Chemistry C 125 (2021) 23299–23312
- 64* Kristina Hübner, Himanshu Joshi, Aleksei Aksimentiev, Fernando D. Stefani, Philip Tinnefeld, and Guillermo P. Acuna
 "Determining the In-Plane Orientation and Binding Mode of Single Fluorescent Dyes in DNA Origami Structures"
ACS Nano 15 (2021) 5109–5117
- 63* Alan M. Szalai, Bruno Siarry, Jerónimo Lukin, Sebastián Giusti, Nicolás Unsain, Alfredo Cáceres, Florian Steiner, Philip Tinnefeld, Damián Refojo, Thomas M. Jovin, and Fernando D. Stefani
 "Super-resolution Imaging of Energy Transfer by Intensity-Based STED-FRET"
Nano Letters 21 (2021) 2296–2303
- 62* Alan Szalai, Bruno Siarry, Jerónimo Lukin, David J. Williamson, Nicolás Unsain, Alfredo Cáceres, Mauricio Pilo-Pais, Guillermo Acuna, Damián Refojo, Dylan M. Owen, Sabrina Simoncelli, Fernando D. Stefani
 "Three-dimensional total-internal reflection fluorescence nanoscopy with nanometric axial resolution by photometric localization of single molecules"
Nature Communications 12 (2021) 517
- 61* Luciano A. Masullo, Florian Steiner, Jonas Zähringer, Lucía F. Lopez, Johann Bohlen, Lars Richter, Fiona Cole, Philip Tinnefeld, Fernando D. Stefani
 "Pulsed Interleaved MINIFLUX"
Nano Letters 21 (2021) 840-846
- 2020
 60* Mariano Barella, Ianina L. Violi, Julian Gargiulo, Luciana P. Martinez, Florian Goschin, Victoria Guglielmotti, Diego Pallarola, Sebastian Schlücker, Mauricio Pilo-Pais, Guillermo P. Acuna, Stefan A. Maier, Emiliano Cortes, Fernando D. Stefani
 "In Situ Photothermal Response of Single Gold Nanoparticles Through Hyperspectral Imaging Anti-Stokes Thermometry"
ACS Nano 15 (2020) 2458-2467
- 59* Alan M Szalai, Lucía F López, Miguel Ángel Morales-Vásquez, Fernando D Stefani, Pedro F Aramendia
 "Analysis of sparse molecular distributions in fibrous arrangements based on the distance to the first neighbor in single molecule localization microscopy"
Nanoscale 12 (2020) 9495–9506
- 58 Gaby F. Martínez, Nahir G. Gazal, Gonzalo Quassollo, Alan M. Szalai, Esther Del Cid-Pellitero, Thomas M. Durcan, Edward A. Fon, Mariano Bisbal, Fernando D. Stefani, Nicolas Unsain
 "Quantitative expansion microscopy for the characterization of the spectrin periodic skeleton of axons using fluorescence microscopy"
Scientific Reports 10 (2020) 2917

- 57 Annette M. Vogl, Lilian Phu, Raquel Becerra, Sebastian A. Giusti, Erik Verschueren, Trent B. Hinkle, Martín D. Bordenave, Max Adrian, Amy Heidersbach, Patricio Yankilevich, Fernando D. Stefani, Wolfgang Wurst, Casper C. Hoogenraad, Donald S. Kirkpatrick, Damian Refojo, Morgan Sheng
 “Global site-specific neddylation profiling reveals that NEDDylated cofilin regulates actin dynamics”
Nature Structural & Molecular Biology 27 (2020) 210–220
- 2019 Kristina Hübner, Mauricio Pilo-Pais, Florian Selbach, Tim Liedl, Philip Tinnefeld, Fernando D. Stefani,
 56* Guillermo P. Acuna
 “Directing Single-Molecule Emission with DNA Origami-Assembled Optical Antennas”
Nano Letters 19 (2019) 6629-6634
- Cecilia Zaza, Ianina L. Violi, Julián Gargiulo, Germán Chiarelli, Ludmilla Schumacher, Jurij Jakobi, Jorge Olmos, Emiliano Cortes, Matthias König, Stephan Barcikowski, Sebastian Schlücker, Juan José Saenz, Stefan A Maier,^{3,7} Fernando D. Stefani
 55* *Size-selective optical printing of silicon nanoparticles through their dipolar magnetic resonance*
ACS Photonics 6 (2019) 815-822
- Santiago Sosa, Andrés Rossi, Alan Szalai, Sebastián Klinke, Jimena Rinaldi, Ana Farias, Paula Berguer, Alejandro D. Nadra, Fernando D. Stefani, Fernando A. Goldbaum, Hernan Bonomi
 54 “Asymmetric bifunctional protein nanoparticles through redesign of self-assembly”
Nanoscale Advances 1 (2019) 1833-1846
- 2018 Alan Szalai, Natalia G. Armando, Federico M. Barabas, Fernando D. Stefani, Luciana Giordano, Sara Bari,
 53 Claudio N. Cavasotto, Susana Silberstein, Pedro F. Aramendía
 “A fluorescence nanoscopy marker for corticotropin-releasing hormone type 1 receptor: computer design, synthesis, signaling effects, super-resolved fluorescence imaging, and in situ affinity constant in cells”
Phys.Chem.Chem.Phys. 20 (2018) 29212-29920
- Rocío G. Sampayo, Andrés M. Toscani, Matthew G. Rubashkin, Kate Thi, Luciano A. Masullo, Ianina L. Violi, Jonathon N. Latkins, Alfredo Cáceres, William C. Hines, Federico Coluccio Leskow, Fernando D. Stefani, Dante R. Chialvo, Mina J. Bissell, Valerie M. Weaver, Marina Simian
 52 “Fibronectin rescues estrogen receptor alpha from lysosomal 1 degradation in breast cancer cells”
Journal of Cell Biology 217 (2018) 2777-2798
- Nicolas Unsain, Fernando D. Stefani, Alfredo Cáceres
 51 “The Actin/Spectrin Membrane-Associated Periodic Skeleton in Neurons”
Frontiers in Synaptic Neuroscience 10 (2018) 10
- Nicolás Unsain, Martín D. Bordenave, Gaby F. Martinez, Sami Jalil, Catalina von Bilderling, Federico Barabas, Luciano A. Masullo, Aaron D. Johnstone, Phil A. Barker, Mariano Bisbal, Fernando D. Stefani, Alfredo Cáceres.
 50 “Remodeling of the Actin/Spectrin Membrane-associated Periodic Skeleton, Growth Cone Collapse and F-Actin Decrease during Axonal Degeneration”
Scientific Reports 8 (2018) 3007
- Yanina D. Álvarez, Jesica V. Pellegrotti, Fernando D. Stefani.
 49* Book chapter: “Gold Nanoparticles as Nucleation Centers for Amyloid Fibrillation”
 In: F. Santamaria, X. Peralta (eds) “Use of Nanoparticles in Neuroscience”.
Neuromethods 135 (2018) 269-291. Humana Press, New York.
- 2017 Federico M. Barabas, Luciano A. Masullo, Martín D. Bordenave, Sebastián Giusti, Nicolás Unsain, Damián
 48* Refojo, Alfredo Cáceres, Fernando D. Stefani
 “Automated quantification of protein periodic nanostructures in fluorescence nanoscopy images: abundance and regularity of neuronal spectrin membrane-associated skeleton”
Scientific Reports 7 (2017) 16029

- 47* Julián Gargiulo, Ianina L. Violi, Santiago Cerrota, LukášChváta, Emiliano Cortés, Eduardo M. Perassi, Fernando Diaz, Pavel Zemánek, Fernando D. Stefani
 “Accuracy and Mechanistic Details of Optical Printing of Single Au and Ag Nanoparticles”
ACS Nano 11 (2017) 9678–9688
- 46* Julian Gargiulo, Thomas Brick, Ianina L. Violi, Facundo C. Herrera, Toshihiko Shibanuma, Pablo Albella, Felix G. Requejo, Emiliano Cortés, Stefan A. Maier, Fernando D. Stefani
 “Understanding and Reducing Photothermal Forces for the Fabrication of Au Nanoparticle Dimers by Optical Printing”
Nano Letters 17 (2017) 5747–5755
- 45* Mario Raab, Carolin Vietz, Fernando D. Stefani, Guillermo P. Acuna and Philip Tinnefeld
 “Shifting molecular localization by plasmonic coupling in a single-molecule mirage”
Nature Communications 8 (2017) 13966
- 44 Francisco Balzarotti, Yvan Eilers, Klaus C. Gwosch, Arvid H. Gynma, Volker Westphal, Fernando D. Stefani, Johan Elf, Stefan W. Hell
 “Nanometer resolution imaging and tracking of fluorescent molecules with minimal photon fluxes”
Science 355 (2017) 606-612
- 2016
 43 Federico Barabas, Luciano Masullo, Fernando D. Stefani
 “Tormenta: an open source Python-powered control software for camera based optical microscopy”
Review of Scientific Instruments 87 (2016) 126103
- 42* Jessica V. Pellegrotti, Emiliano Cortés, Martin D. Bordenave, Martin Caldarola, Mark P. Kreuzer, Alfredo D. Sanchez, Ignacio Ojea, Andrea V. Bragas, Fernando D. Stefani
 “Plasmonic photothermal fluorescence modulation for homogenous biosensing”
ACS Sensors 1 (2016) 1351-1357
- 41* Ianina L. Violi, Julián Gargiulo, Catalina von Bilderling, Emiliano Cortés, and Fernando D. Stefani
 “Light-Induced Polarization-Directed Growth of Optically Printed Gold Nanoparticles”
Nano Letters 16 (2016) 6529–6533
- 40* Martin D. Bordenave, Francisco Balzarotti, Fernando D. Stefani, Stefan W. Hell
 “STED nanoscopy with wavelengths at the emission maximum”
Journal of Physics D: Applied Physics 49 (2016) 365102
- 39* Julian Gargiulo, Santiago Cerrota, Emiliano Cortés, Ianina L. Violi, Fernando D. Stefani
 “Connecting metallic nanoparticles by optical printing”
Nano Letters 16 (2016) 1224–1229
- 2015
 38 Thorben Cordes, William Moerner, Michel Orrit, Sergey Sekatskii, Sanli Faez, Paola Borri, Himangshu Prabal Goswami, Alex Clark, Patrick El-Khoury, Sandra Mayr, Jacek Mika, Guowei Lyu, Daniel Cross, Francisco Balzarotti, Wolfgang Langbein, Vahid Sandoghdar, Jens Michaelis, Arindam Chowdhury, Alfred J Meixner, Niek van Hulst, Brahim Lounis, Fernando Stefani, Frank Cichos, Maxime Dahan, Lukas Novotny, Mark Leake
 “Plasmonics, Tracking and Manipulating, and Living Cells: general discussion”
Faraday discussions 184 (2015) 451 - 473
- 2014
 37* J. V. Pellegrotti, Martin Caldarola, Mark P. Kreuzer, Emiliano Cortés, Martin D. Bordenave, Alfredo D. Sanchez, Ignacio Ojea, Andrea V. Bragas, Fernando D. Stefani
 “Biosensado basado en modulación de fluorescencia por calentamiento plasmónico de nanovarillas de oro”
Anales de la Academia Nacional de Ciencias Exactas, Físicas y Naturales 66 (2014) 82-94
- 36* J. V. Pellegrotti, G. P. Acuna, A. Puchkova, P. Holzmeister, A. Gietl, B. Lalkens, F. D. Stefani, P. Tinnefeld
 “Controlled reduction of photobleaching in DNA origami - gold nanoparticle hybrids”
Nano Letters 14 (2014) 2831–2836

- 35 D. Brinks, R. Hildner, E. M. H. P. van Dijk, F. D. Stefani, J. B. Nieder, J. Hernand, N. F. van Hulst
 "Ultrafast dynamics of single molecules"
Chemical Society Reviews 43 (2014) 2476-2491
- 2013 34* Y. D. Alvarez, J. A. Fauerbach, J. V. Pellegrotti, T. M. Jovin, E. A. Jares-Erijman, F. D. Stefani
 "Influence of gold nanoparticles on the kinetics of α -synuclein aggregation"
Nano Letters 13 (2013) 6156-6163
- 2012 33* F. Balzarotti, F. D. Stefani
 "Plasmonics Meets Far-Field Optical Nanoscopy"
ACS Nano 6 (2012) 4580-4584
- 32 G. P. Acuna, M. Bucher, I. H. Stein, Ch. Steinhauer, A. Kuzyk, P. Holzmeister, R. Schreiber, A. Moroz, F. D. Stefani, T. Liedl, F. C. Simmel, P. Tinnefeld
 "Distance Dependence of Single-Fluorophore Quenching by Gold Nanoparticles Studied on DNA Origami"
ACS Nano 6 (2012) 3189-3195
- 31 S. R. Kirchner, A. Ohlinger, T. Pfeiffer, A. S. Urban, F. D. Stefani, A. Deak, A. A. Lutich, J. Feldmann
 "Membrane composition of jetted lipid vesicles: a Raman spectroscopy study"
Journal of Biophotonics 5 (2012) 40-46
- 2011 30 D. Brinks, R. Hildner, F. D. Stefani, N. F. van Hulst
 "Beating spatio-temporal coupling: implications for pulse shaping and coherent control experiments"
Optics Express 19 (2011) 26486-26499
- 29* E. A. Coronado, E. R. Encina, F.D. Stefani
 "Optical Properties of Metallic Nanoparticles: manipulating light, heat and forces at the nanoscale"
Nanoscale 3 (2011) 4042-4059
- 28 D. Brinks, R. Hildner, F. D. Stefani, N. F. van Hulst
 "Coherent control of single molecules at room temperature"
Faraday Discussions 153 (2011) 51-60
- 27 R. Hildner, D. Brinks, F. D. Stefani, N. F. van Hulst
 "Electronic Coherences and Vibrational Wave Packets in Single Molecules Studied with Femtosecond Phase-Controlled Spectroscopy"
Physical Chemistry Chemical Physics 13 (2011) 1888-1894
- 26 T.H. Taminiau, F. D. Stefani, N. F. van Hulst
 "One-Dimensional Resonator Theory for the Interaction of Optical Antennas with Dipolar Transitions and Radiation"
Nano Letters 11 (2011) 1020-1024
- 2010 25 * A. S. Urban, A. A. Lutich, F. D. Stefani, J. Feldmann
 "Laser printing single gold nanoparticles"
Nano Letters 10 (2010) 4794-4798
- 24 * S. K. Dondapati, T. K. Sau, C. Hrelescu, T. A. Klar, F. D. Stefani, J. Feldmann
 "Label-free biosensing based on single gold nanostars as plasmonic transducers"
ACS Nano 4 (2010) 6318-6322
- 23 H. Ba, J. Rodríguez-Fernández, F. D. Stefani, J. Feldmann
 "Tagging Single Gold Nanoparticles to Lipids in Living Cell Membranes"
Nano Letters 10 (2010) 3006-3012
- 22 * D. Brinks, F. D. Stefani, N. F. van Hulst
 "Visualizing and controlling vibrational wavepackets of single molecules"
Nature 465 (2010) 905-908

- 21 A. A. Lutich, A. Pöschl, G. Jiang, A. S. Sussha, A. L. Rogach, F. D. Stefani, J. Feldmann
 “Efficient energy transfer in layered hybrid organic/inorganic nanocomposites: a dual function of semiconductor nanocrystals”
Applied Physics Letters 96 (2010) 083109
- 2009 G. Jiang, A. S. Sussha, A. A. Lutich, F. D. Stefani, A. L. Rogach, J. Feldmann
 20 “Cascaded Two-Level FRET from Conjugated Polymer/Quantum Dot Complexes for DNA Hybridization Detection”
ACS Nano 3 (2009) 4127–4131
- 19 * S. Mayilo, M. A. Kloster, M. Wunderlich, A. Lutich, T. A. Klar, A. Nichtl, K. Kürzinger, F. D. Stefani, J. Feldmann
 “Long-range fluorescence quenching by gold nanoparticles in a sandwich immunoassay for cardiac troponin T”
Nano Letters 9 (2009) 4558-4563
- 18 * M. Stemmler, F. D. Stefani, S. Bernhardt, R. E. Bauer, M. Kreiter, K. Müllen, W. Knoll
 “One-Pot Preparation of Dendrimer–Gold Nanoparticle Hybrids in a Dipolar Aprotic Solvent”
Langmuir 25 (2009) 12425–12428
- 17 * A. S. Urban, M. Fedoruk, F. D. Stefani, M. Horton, J.O. Rädler, J. Feldmann
 “Controlled nanometric phase transitions on phospholipid membranes by plasmonic heating of single gold nanoparticles”
Nano Letters 9 (2009) 2903-2908
- 16 * A. A. Lutich, G. Jiang, F. D. Stefani*, A. S. Sussha, A. L. Rogach, J. Feldmann.
 “Energy transfer versus charge separation in type-II hybrid organic-inorganic nanocomposites”
Nano Letters 9 (2009) 2636-2640
- 15 T. K. Sau, A. S. Urban, S. K. Dondapati, M. Fedoruk, M. R. Horton, A. L. Rogach, F. D. Stefani, J. O. Rädler, J. Feldmann
 “Controlling loading and optical properties of gold nanoparticles on liposome membranes”
Colloids and Surfaces A: Physicochem. Eng. Aspects 342 (2009) 92-96
- 14 F. D. Stefani, J. P. Hoogenboom, Eli Barkai
 “Beyond quantum jumps: the blinking of single emitters ”
Physics Today 62 (February 2009) 34-39
- 2008 T. Taminiau, F. D. Stefani, N. F. Van Hulst
 13 “Directional Enhanced Excitation and Emission of Single Emitters by a Nano-Optical Yagi-Uda Antenna”
Optics Express 16 (2008) 16858-16866
- 12 T. Taminiau, F. D. Stefani, N. F. van Hulst
 “Nano-antennas for single molecules - orientation and distance dependencies”
New Journal of Physics 10 (2008) 105005
- 11 T. Taminiau, F. D. Stefani, F. Segerink, N. F. van Hulst
 “Optical antennas direct single molecule emission”
Nature Photonics 2 (2008) 234 – 237
- 2007 F. D. Stefani, K. Vasilev, N. Bocchio, F. Gaul, A. Pomozzi, M. Kreiter
 10 * “Photonic mode density effects on single molecule fluorescence blinking”
New Journal of Physics 9 (2007) 21
- 2006 F. D. Stefani, C. Kohl, Y. S. Avlasevich, N. Horn, A. K. Vogt, K. Müllen, M. Kreiter
 9 “Thermochromic Fluorophores and Their NIR Laser Induced Transformation”
Chemistry of Materials 18 (2006) 6115-6120

- 8 R. Robelek, F. D. Stefani, W. Knoll
 “Oligonucleotide hybridization monitored by surface plasmon enhanced fluorescence spectroscopy with bio-conjugated core/shell quantum dots. Influence of luminescence blinking”
phys. stat. sol. (a) 203 (2006) 3468–3475
- 7 W. Knoll, X. H. Zhong, F. D. Stefani, R. Robelek, L. F. Niu, H. Rochholz, J. Shumaker-Parry, M. Kreiter
 “Optics with nano-sized structures made from semiconductors and (noble) metals”
Journal of Nonlinear Optical Physics & Materials 15 (2006) 355-367
- 2005 F. D. Stefani, W. Knoll, X. Zhong, M. Y. Han, M. Kreiter
 6 “Quantification spontaneous and photoinduced quantum-dot photoluminescence blinking”
Physical Review B 72 (2005) 125304
- 5 F. D. Stefani, W. Knoll, X. Zhong, M. Y. Han, M. Kreiter
 “Memory in quantum-dot photoluminescence blinking”
New Journal of Physics 7 (2005) 197
- 4 F. D. Stefani, K. Vasilev, N. Bocchio, N. Stoyanova, M. Kreiter
 “Surface plasmon mediated single molecule fluorescence through a thin metallic film”
Physical Review Letters 94 (2005) 023005
- 2004 K. Vasilev, F. D. Stefani, V. Jacobsen, W. Knoll, M. Kreiter
 3 “Reduced photobleaching of chromophores close to a metal surface”
Journal of Chemical Physics 120 (2004) 6701
- 2 A. K. Vogt, F. D. Stefani, A. Best, G. Nelles, A. Yasuda, W. Knoll, A. Offenhäuser
 “Impact of micropatterned surfaces on neuronal polarity”
Journal of Neuroscience Methods 134 (2004) 191
- 1 A. Baba, S. Tian, F. D. Stefani, C. Xia, Z. Wang, R. C. Advincula, D. Johannsmann, W. Knoll
 “Electropolymerization and doping/dedoping properties of polyaniline thin films as studied by electrochemical-surface plasmon spectroscopy and by the quartz crystal microbalance”
Journal of Electroanalytical Chemistry 562 (2004) 95

Patents

- 2021 Luciano Masullo, Lucía López, Alan Szalai, Fernando D. Stefani
 “Método de alta precisión para la localización de moléculas individuales, reconstrucción de imágenes de super-resolución y el seguimiento de moléculas individuales, y aparato para llevarlo a cabo”
 Filed at INPI (Argentina) N° 20210102405 – 27.08.2021
- 2020 Alan Szalai, Sabrina Simoncelli, Fernando D. Stefani
 “Método para mejorar la resolución axial de un microscopio de fluorescencia”
 Filed at INPI (Argentina) N° 2020010187 – 02.07.2020
- 2016 Jessica. V. Pellegrotti, Fernando D. Stefani
 “Molecular sensing method based on luminescence modulation through specific nanoparticle heating”.
 Filed at WIPO|PCT WO2016/009352 A1 – 21.01.2016
- 2014 Jessica. V. Pellegrotti, Fernando D. Stefani
 “Método de sensado molecular basado en modulación de luminiscencia por calentamiento específico de nanopartículas”
 Filed at INPI (Argentina) N° 20140102610 – 15.07.2014

Open publications and software

In Spanish: Política científico-tecnológica y monitoreo de la evolución de la inversión pública en I+D en base a datos abiertos <https://stefani-lab.ar/politica-cientifica/>

Software for simulations, data análisis and instrument control <https://github.com/Stefani-Lab>

Presentations at international conferences

Total: >200 Charlas invitadas en congresos internacionales: >30

Invited talks of the last years:

- 11.01.2023 11th International Weber Symposium on Innovative Fluorescence Methodologies in Biochemistry and Medicine – Punta del Este, Uruguay
“RASTMIN: an alternative to MINFLUX that enables nanometre resolution in a confocal microscope”
- 18.11.2022 Sociedad Argentina de Biofísica – Rosario, Argentina
“RASTMIN: an alternative to MINFLUX that enables nanometre resolution in a confocal microscope”
- 13.09.2022 Latin America Bioimaging, Chan Zuckerberg Initiative – Montevideo, Uruguay
“Surpassing the sub-10 resolution limit in fluorescence nanoscopy” - plenary talk
- 29.08.2022 OPTICA Webinar, Optical Society of America, Microscopy and Optical Tomography Section Estados Unidos
“Localization of Fluorophores”
- 08.03.2022 Nanolight 2022 - Centro de Ciencias Pedro Pascual – Benasque, Spain
“Single molecule localization through sequential structured illumination”
- 05.10.2021 20th IUPAB Congress – San Pablo, Brazil
“Fluorescence Nanoscopy with sub-10 nm resolution ... approaching molecular resolution”
- 19.07.2019 Revisiting the Central Dogma of Molecular Biology at the Single-Molecule Level – Lima, Perú
“Far-field fluorescence nanoscopy with sub-10 nm resolution”

Research funding as PI

- 2023 – 2027 Agencia Nacional de Promoción Científica y Tecnológica, Argentina
Research Grant PICT-2021-01216 ~45.000 USD
- 2022 Alexander von Humboldt Foundation, Germany
Equipment subsidy ~30,000 USD
- 2019 – 2024 National Scientific and Technical Research Council (CONICET)
Funds for 2 Ph.D. candidates (Florencia Edorna, Florencia Choque) ~ 96,000 USD

- 2019 – 2024 National Scientific and Technical Research Council (CONICET)
Funds for 1 Ph.D. candidate (Gonzalo Escalante) ~ 48,000 USD
- 2018 – 2023 Agencia Nacional de Promoción Científica y Tecnológica, Argentina
Research Grant PICT-2017-0870 ~30,000 USD
- 2017 Alexander von Humboldt Foundation, Germany
Georg Forster Research Award ~70,000 USD
- 2017 – 2022 National Scientific and Technical Research Council (CONICET)
Funds for 1 Ph.D. candidate (Luciana Martínez) ~ 48,000 USD
- 2017 – 2019 National Scientific and Technical Research Council (CONICET)
Funds for 3 postdocs (Alan Szalai, Lucía Lopez, Mariano Barella) ~ 132,000 USD
- 2016 – 2021 National Scientific and Technical Research Council (CONICET)
Funds for 1 Ph.D. candidate (Santiago Sosa) ~ 48,000 USD
- 2016 – 2018 National Scientific and Technical Research Council (CONICET)
Funds for 1 postdoc (Bruno Siarry) ~ 44,000 USD
- 2016 National Scientific and Technical Research Council (CONICET)
Funds for visiting Professor Thomas Klar ~10,000 USD
- 2015 – 2020 National Scientific and Technical Research Council (CONICET)
Funds for 2 Ph.D. candidates (Luciano Masullo, Cecilia Zaza) ~ 96,000 USD
- 2015 National Scientific and Technical Research Council (CONICET)
Funds for visiting Professor Philip Tinnefeld ~10,000 USD
- 2015 – 2020 Agencia Nacional de Promoción Científica y Tecnológica, Argentina
Research Grant PICT-2014-3729 ~100,000 USD
- 2014 – 2017 Agencia Nacional de Promoción Científica y Tecnológica, Argentina
Research Grant PICT-2013-0792 ~45,000 USD
- 2014 – 2016 National Scientific and Technical Research Council (CONICET)
Funds for 2 postdocs (Eduardo Perassi, Jessica Pellegrotti) ~ 44,000 USD
- 2012 – 2015 Ministry of Science, Technology and Innovation, Argentina
Start-up grant ~300,000 USD
- 2012 – 2014 National Scientific and Technical Research Council (CONICET)
Funds for 1 postdoc (Emiliano Cortés) ~ 22,000 USD
- 2011 – 2016 Max-Planck-Society
Max-Planck Partner Group ~125,000 USD
- 2011 – 2016 National Scientific and Technical Research Council (CONICET)
Funds for 3 Ph.D. candidates (J. Gargiulo, F. Barabas, M. Bordenave) ~ 144,000 USD
- 2011 – 2012 National Scientific and Technical Research Council (CONICET)
Funds for 1 postdoc ~ 22,000 USD

2011 – 2014	Agencia Nacional de Promoción Científica y Tecnológica, Argentina Research Grant PICT-2009-0110 ~20,000 USD
2011 – 2012	Agencia Nacional de Promoción Científica y Tecnológica, Argentina Research Grant PICT-2010-2511 ~40,000 USD
2011 – 2012	University of Buenos Aires, Argentina Research Grant UBACYT 20020100300085 ~2,000 USD
2011	Fundación Argentina de Nanotecnología Equipment subsidy ~15,000 USD
2011	National Scientific and Technical Research Council (CONICET) Equipment subsidy ~22,000 USD
2009 – 2010	University of Buenos Aires, Argentina Funds for 1 undergraduate student (Jessica Pellegrotti) ~ 9,000 USD