



PROF. DR. FERNANDO D. STEFANI

Born in Buenos Aires, November 19th, 1975. Married, 4 sons
fernando.stefani@df.uba.ar
<https://stefani-lab.ar/>

CURRENT POSITIONS

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

AREAS OF INTEREST

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

METHODS

Single-molecule spectroscopy
Super-resolution fluorescence microscopy
Time-resolved optical spectroscopy
Optical and photothermic manipulation
Single-molecule (particle) tracking
Molecular self-assembly

ACADEMIC CAREER

10.2019 – present **Full Professor**, Department of Physics, **University of Buenos Aires**, Argentina
07.2013 – present **Deputy Director**, **Center for Bionanoscience Research** (CIBION- **CONICET**), Buenos Aires, Argentina
12.2009 – present **Researcher**, 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**
11.2009 – 09.2019 **Associate Professor**, Department of Physics, University of Buenos Aires, Argentina
03.2008 – 09.2009 **Assistant Professor**, Faculty of Physics, **Ludwig-Maximilians-Universität München** - Munich, Germany
04.2006 – 02.2008 **Postdoc**, **Institute of Photonic Sciences** (ICFO)- Barcelona, Spain
04.2006 – 02.2008 **Postdoc**, **Max-Planck-Institut für Polymerforschung**- Mainz, Germany

AWARDS

2021 Member of the Argentine Association for the Advancement of Science (AAPC), Argentina
2018 Houssay Prize in Mathematics, Physics, Astronomy, and Computation, by the Ministry of Science, Technology and Innovation (MINCYT, Argentina)
2018 Distinction for Academic Excellence by the University of Buenos Aires (Argentina)
2017 Georg Foster Research Award, by the Alexander von Humboldt Foundation (Germany)
2017 Innovar Award for Innovation at Universities by MINCYT (Argentina)
2015 Distinction for Academic Excellence by the University of Buenos Aires (Argentina)
2015 Mercator Fellowship of the Deutsche Forschungsgemeinschaft (DFG, Germany)
2014 Innovar Award for Applied Research by MINCYT (Argentina)
2014 Young Investigator Award from the National Academy of Exact, Physical and Natural Sciences (Argentina)
2012, 2010 y 2009 Publication Award by the Center For Nanoscience (CeNS, Munich, Germany)
2005 Otto Hahn Medal by the Max Planck Society (Germany)

Ph.D. “Confocal microscopy applied to the study of single entity fluorescence and light scattering” - **summa cum laude**
2001 – 2004 **Max-Planck-Institut für Polymerforschung – Mainz, Germany.** Director: Prof. Dr. Wolfgang Knoll

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

CURRENT TRAINING OF YOUNG RESEARCHERS

Direction of PhD thesis (4): Cecilia Zaza, Gonzalo Escalante, Florencia Choque, Florencia Edorna

Co-direction of PhD thesis (4): Luciana Martínez (Dir. Pedro Aramendía), Santiago Sosa (Dir. Fernando Goldbaum), Raquel Becerra (Dir. Damián Refojo), Ana Wendel (Dir. Rodrigo Palacios)

Direction of postdocs (3): Dr. Mariano Barella

Co-direction of assistant researchers (2): Dr. Ianina Violi (Dir. Prof. Dr. Galo Soler Illia), Dr. Julián Gargiulo (Dir. Prof. Dr. Galo Soler Illia), Dr. Pablo Zangara (Dir. Prof. Dr. Rodolfo Acosta)

ALUMNI

Dr. Fernando Diaz	Optical Engineer at Baraja Pty Ltd. – New South Wales, Australia
Dr. Jesica Pellegrotti	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 at the Nano Institute Munich, 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 Martin – Buenos Aires, Argentina
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	Graduate Student at Instituto Balseiro – Bariloche, Argentina
Santiago Cerrotta	Graduate Student at National Technological University – Campana, Buenos Aires, Argentina
Bruno Scocozza	Graduate Student at Max-Planck-Institute of Molecular Physiology – Dortmund, Germany
Germán Chiarelli	Graduate Student at University of Fribourg – Fribourg, Switzerland
Robin Puchert	Graduate Student at 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
Dr. Alan Szalai	Postdoc at Ludwig-Maximilians University – Munich, Germany
Fernando Caprile	Jr. Developer at Iquall Networks – Buenos Aires, Argentina

VISITING PROFESSOR

05.2019 **University of Fribourg (Switzerland)**- Host: Prof. Dr. Guillermo P. Acuna

03.2018, 05.2019 **Ludwig-Maximilians-University Munich (LMU - Germany)** - Host: Prof. Dr. Philip Tinnefeld

07.2017, 09.2015, 07.2012 **Technical University of Braunschweig (Germany)** - Host: Prof. Dr. Philip Tinnefeld

07.2013, 03.2012, 04.2011 **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/

70 peer-reviewed publications in international journals

[Google scholar metrics](#) h-index: 36 Total citations > 6200

[Scopus Metrics](#) h-index: 31 Total citations > 4600

- 2022 Fernando Caprile, Luciano A. Masullo, Fernando D. Stefani
70 “PyFocus – a Python package for vectorial calculations of focused optical fields under realistic conditions. Application to toroidal foci.”
Computer Physics Communications – accepted <https://arxiv.org/abs/2110.00160>
- Ianina L. Violi, Luciana P. Martinez, Mariano Barella, Cecilia Zaza, Lukáš Chvátal, Pavel Zemánek, Marina V. Gutiérrez, María Y. Paredes, Alberto F. Scarpettini, Jorge Olmos-Trigo, Valeria R. Pais, Iván Díaz Nóbrega, Emiliano Cortes, Juan José Sáenz, Andrea V. Bragas, Julian Gargiulo, Fernando D. Stefani
69 “Challenges on Optical Printing of Colloidal Nanoparticles”
Journal of Chemical Physics 156 (2022) 034201
- Luciano A. Masullo, Lucía F. Lopez, Fernando D. Stefani
68* “A common framework for single-molecule localization using sequential structured illumination”
Biophysical Reports 2 (2022) 100036
- Luciano A. Masullo, Alan M. Szalai, Lucía F. Lopez, Fernando D. Stefani
67* “Fluorescence nanoscopy at the sub-10 nm scale”
Biophysical Reviews 13 (2022) 1101-1112
- 2021 Alan M. Szalai, Cecilia Zaza, Fernando D. Stefani
66* “Super-resolution FRET measurements”
Nanoscale 13 (2021) 18421 - 18433
- Rodrigo A. Ponzio, Ramiro M. Spada, Ana B. Wendel, M. Virginia Forcone, Fernando D. Stefani, Carlos A. Chesta, Rodrigo E. Palacios
65 “Exciton diffusion, antenna effect and quenching defects in superficially dye doped conjugated polymer nanoparticles”
Journal of Physical Chemistry C 125 (2021) 23299–23312
- Kristina Hübner, Himanshu Joshi, Aleksei Aksimentiev, Fernando D. Stefani, Philip Tinnefeld, and Guillermo P. Acuna
64* “Determining the In-Plane Orientation and Binding Mode of Single Fluorescent Dyes in DNA Origami Structures”
ACS Nano 15 (2021) 5109–5117
- 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
63* “Super-resolution Imaging of Energy Transfer by Intensity-Based STED-FRET”
Nano Letters 21 (2021) 2296–2303
- 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
62* “Three-dimensional total-internal reflection fluorescence nanoscopy with nanometric axial resolution by photometric localization of single molecules”
Nature Communications 12 (2021) 517
- Luciano A. Masullo, Florian Steiner, Jonas Zähringer, Lucía F. Lopez, Johann Bohlen, Lars Richter, Fiona Cole, Philip Tinnefeld, Fernando D. Stefani
61* “Pulsed Interleaved MINFLUX”
Nano Letters 21 (2021) 840-846

Fernando D. Stefani – Curriculum Vitae

- 2020 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
- 60* “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, Guillermo P. Acuna
- 56* “Directing Single-Molecule Emission with DNA Origami-Assembled Optical Antennas”
Nano Letters 19 (2019) 6629-6634
- 55* 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
“Size-selective optical printing of silicon nanoparticles through their dipolar magnetic resonance”
ACS Photonics 6 (2019) 815-822
- 54 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
“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, Claudio N. Cavasotto, Susana Silberstein, Pedro F. Aramendía
- 53 “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
- 52 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
“Fibronectin rescues estrogen receptor alpha from lysosomal 1 degradation in breast cancer cells”
Journal of Cell Biology 217 (2018) 2777-2798
- 51 Nicolas Unsain, Fernando D. Stefani, Alfredo Cáceres
“The Actin/Spectrin Membrane-Associated Periodic Skeleton in Neurons”
Frontiers in Synaptic Neuroscience 10 (2018) 10

Fernando D. Stefani – Curriculum Vitae

- 50 Nicolás Unsain, Martin 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. "Remodeling of the Actin/Spectrin Membrane-associated Periodic Skeleton, Growth Cone Collapse and F-Actin Decrease during Axonal Degeneration"
Scientific Reports 8 (2018) 3007
- 49* Yanina D. Álvarez, Jesica V. Pellegrotti, Fernando D. Stefani.
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 Refojo, Alfredo Cáceres, Fernando D. Stefani
- 48* "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, LukášChvátal, 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 Shibamura, 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, 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 Federico Barabas, Luciano Masullo, Fernando D. Stefani
- 43 "Tormenta: an open-source Python-powered control software for camera-based optical microscopy"
Review of Scientific Instruments 87 (2016) 126103
- 42* Jesica 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

Fernando D. Stefani – Curriculum Vitae

- 2015 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
38 "Plasmonics, Tracking and Manipulating, and Living Cells: general discussion"
Faraday discussions 184 (2015) 451 - 473
- 2014 J. V. Pellegrotti, Martin Caldarola, Mark P. Kreuzer, Emiliano Cortés, Martin D. Bordenave, Alfredo D. Sanchez, Ignacio Ojea, Andrea V. Bragas, Fernando D. Stefani
37* "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
- J. V. Pellegrotti, G. P. Acuna, A. Puchkova, P. Holzmeister, A. Gietl, B. Lalkens, F. D. Stefani, P. Tinnefeld
36* "Controlled reduction of photobleaching in DNA origami - gold nanoparticle hybrids"
Nano Letters 14 (2014) 2831–2836
- D. Brinks, R. Hildner, E. M. H. P. van Dijk, F. D. Stefani, J. B. Nieder, J. Hernand, N. F. van Hulst
35 "Ultrafast dynamics of single molecules"
Chemical Society Reviews 43 (2014) 2476-2491
- 2013 Y. D. Alvarez, J. A. Fauerbach, J. V. Pellegrotti, T. M. Jovin, E. A. Jares-Erijman, F. D. Stefani
34* "Influence of gold nanoparticles on the kinetics of α -synuclein aggregation"
Nano Letters 13 (2013) 6156-6163
- 2012 F. Balzarotti, F. D. Stefani
33* "Plasmonics Meets Far-Field Optical Nanoscopy"
ACS Nano 6 (2012) 4580–4584
- 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
32 "Distance Dependence of Single-Fluorophore Quenching by Gold Nanoparticles Studied on DNA Origami"
ACS Nano 6 (2012) 3189–3195
- S. R. Kirchner, A. Ohlinger, T. Pfeiffer, A. S. Urban, F. D. Stefani, A. Deak, A. A. Lutich, J. Feldmann
31 "Membrane composition of jetted lipid vesicles: a Raman spectroscopy study"
Journal of Biophotonics 5 (2012) 40–46
- 2011 D. Brinks, R. Hildner, F. D. Stefani, N. F. van Hulst
30 "Beating spatio-temporal coupling: implications for pulse shaping and coherent control experiments"
Optics Express 19 (2011) 26486-26499
- E. A. Coronado, E. R. Encina, F.D. Stefani
29* "Optical Properties of Metallic Nanoparticles: manipulating light, heat and forces at the nanoscale"
Nanoscale 3 (2011) 4042-4059
- D. Brinks, R. Hildner, F. D. Stefani, N. F. van Hulst
28 "Coherent control of single molecules at room temperature"
Faraday Discussions 153 (2011) 51-60
- R. Hildner, D. Brinks, F. D. Stefani, N. F. van Hulst
27 "Electronic Coherences and Vibrational Wave Packets in Single Molecules Studied with Femtosecond Phase-Controlled Spectroscopy"
Physical Chemistry Chemical Physics 13 (2011) 1888-1894
- T.H. Taminiau, F. D. Stefani, N. F. van Hulst
26 "One-Dimensional Resonator Theory for the Interaction of Optical Antennas with Dipolar Transitions and Radiation"
Nano Letters 11 (2011) 1020–1024

Fernando D. Stefani – Curriculum Vitae

- 2010 A. S. Urban, A. A. Lutich, F. D. Stefani, J. Feldmann
25 * "Laser printing single gold nanoparticles"
Nano Letters 10 (2010) 4794–4798
- S. K. Dondapati, T. K. Sau, C. Hrelescu, T. A. Klar, F. D. Stefani, J. Feldmann
24 * "Label-free biosensing based on single gold nanostars as plasmonic transducers"
ACS Nano 4 (2010) 6318–6322
- H. Ba, J. Rodríguez-Fernández, F. D. Stefani, J. Feldmann
23 "Tagging Single Gold Nanoparticles to Lipids in Living Cell Membranes"
Nano Letters 10 (2010) 3006–3012
- D. Brinks, F. D. Stefani, N. F. van Hulst
22 * "Visualizing and controlling vibrational wavepackets of single molecules"
Nature 465 (2010) 905-908
- A. A. Lutich, A. Pöschl, G. Jiang, A. S. Susha, A. L. Rogach, F. D. Stefani, J. Feldmann
21 "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. Susha, 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
- S. Mayilo, M. A. Kloster, M. Wunderlich, A. Lutich, T. A. Klar, A. Nichtl, K. Kürzinger, F. D. Stefani, J. Feldmann
19 * "Long-range fluorescence quenching by gold nanoparticles in a sandwich immunoassay for cardiac troponin T"
Nano Letters 9 (2009) 4558-4563
- M. Stemmler, F. D. Stefani, S. Bernhardt, R. E. Bauer, M. Kreiter, K. Müllen, W. Knoll
18 * "One-Pot Preparation of Dendrimer–Gold Nanoparticle Hybrids in a Dipolar Aprotic Solvent"
Langmuir 25 (2009) 12425–12428
- A. S. Urban, M. Fedoruk, F. D. Stefani, M. Horton, J.O. Rädler, J. Feldmann
17 * "Controlled nanometric phase transitions on phospholipid membranes by plasmonic heating of single gold nanoparticles"
Nano Letters 9 (2009) 2903-2908
- A. A. Lutich, G. Jiang, F. D. Stefani*, A. S. Susha, A. L. Rogach, J. Feldmann.
16 * "Energy transfer versus charge separation in type-II hybrid organic-inorganic nanocomposites"
Nano Letters 9 (2009) 2636-2640
- 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
15 "Controlling loading and optical properties of gold nanoparticles on liposome membranes"
Colloids and Surfaces A: Physicochem. Eng. Aspects 342 (2009) 92-96
- F. D. Stefani, J. P. Hoogenboom, Eli Barkai
14 "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

Fernando D. Stefani – Curriculum Vitae

- 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 W, 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

PATENT APPLICATIONS

- 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”
Presentada al INPI N° 20210102405 – 27.08.2021

Fernando D. Stefani – Curriculum Vitae

- 2020 Alan Szalai, Sabrina Simoncelli, Fernando D. Stefani
“Método para mejorar la resolución axial de un microscopio de fluorescencia”
INPI N° 2020010187 – 02.07.2020
- 2016 Jessica. V. Pellegrotti, Fernando D. Stefani
“Molecular sensing method based on luminescence modulation through specific nanoparticle heating”.
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”. INPI N° 20140102610 – 15.07.2014

ORGANIZATION OF CONFERENCES AND COURSES

- 2016 XVI Encuentro de Superficies y Materiales Nanoestructurados. Buenos Aires, Argentina
- 2015 Discussions on Nano and Mesoscopic Optics – DINAMO. El Chaltén, Argentina
- 2013 Workshop sobre Avances de Microscopía Óptica de Super-Resolución. Buenos Aires, Argentina
- 2011 Plasmons 2011 – workshop satélite del XVII Congreso Argentino de Físicoquímica y Química Inorgánica Córdoba, Argentina
- 2011 XIII Escuela Giambiagi de Nanofotónica – Departamento de Física, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires. Buenos Aires, Argentina

PRESENTATIONS AT INTERNATIONAL CONFERENCES

Total : >100 Invited: >30

Most relevant invited talks of the last years:

- 5.10.2021 **20th IUPAB Congress – San Pablo, Brasil**
“Fluorescence Nanoscopy with sub-10 nm resolution ... approaching molecular resolution”
- 25.11.2020 **2nd Annual Workshop on Advanced Microscopy and Biophotonics – Montevideo, Uruguay**
“Far-field fluorescence nanoscopy with sub-10 nm 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”
- 25.05.2019 **Molecular Plasmonics 2019 – Jena, Germany**
“Optical printing colloidal nanoparticles”
- 01.06.2018 **XVIII Encuentro de Superficies y Materiales Nanoestructurados, Berisso, Buenos Aires, Argentina**
“Nueva generación de nanoscopías de fluorescencia”
- 14.03.2018 **Nanolight – Centro de Ciencias de Benasque, España**
“Optical printing colloidal nanoparticles, an interplay between nanoscale optical and thermal fields”
- 29.09.2017 **Conf. Plenaria. 102a Reunión de la Asociación Física Argentina. La Plata, Argentina**
“Nano-óptica con moléculas y nanopartículas individuales”
- 30.05.2017 **10th International Weber Symposium. Buzios, Brasil**
“Nanometer resolution single-molecule localization with minimal photon fluxes”
- 30.05.2017 **2nd Discussions on Nano and Mesoscopic Optics – DINAMO. Siglufjordur, Iceland**
“Nanometer resolution single-molecule localization with minimal photon fluxes”
- 22.09.2015 **CeNS Workshop Venice: Channels and Bridges to the Nanoworld. San Servolo, Venice, Italy**
“Manipulating light, heat, and forces at the nanoscale with metallic nanoparticles”