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CONTACT INFORMATIONS

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CAREER FACTS

I received my degree in Electronic Engineering with full marks in 2004 and obtained the Ph.D. in Physics in 2008 working in the framework of MIUR-FIRB 2001 project *Nanotechnologies and Nanodevices for the Information Society*. My research in the group of Prof. Giulio Cerullo was focused on **mapping the near-field nonlinear response in plasmonic nano-resonators**. For these studies, I received a best talk award at the Italian Student Chapter of the Optical Society of America (OSA) in 2007.

I spent the last period of the PhD as an exchange student at ETH – Zurich in the Nano-Optics group of Prof. Vahid Sandoghdar, working on nanospectroscopy.

From July 2008 to April 2011 I worked as a Post-Doc position in the same Nano-Optics group in Zurich, where I focused on the development of interferometric scattering microscopy techniques. Here, I performed **the first measurement on light absorption by a single molecule at room temperature**. This subject constituted a milestone of the FP6 Integrated project: *Integrated technologies for in-vivo Molecular imaging* (Project Reference: 503259).

Within this project I developed protocols to properly dispose, label, deposit and observe single proteins and nano-objects.

Since December 2012 I am Assistant Professor at the Politecnico di Milano.

Here, I conduct my independent research on Nanophotonics and Plasmonics with a specific focus on the study of **the linear and nonlinear optical processes occurring in plasmonic and photonic nanoantennas** with the aim of enhancing light-matter coupling at the nanoscale.

These studies were recently funded by the Cariplo Foundation (200 k€ grant - project: *SHAPES*, code: 2013-0736). I am also involved in other projects focused on spin optical injection and highly-doped semiconductor-based optical antennas.

Thanks to the scientific collaboration with Prof. M. Krishnan at the University Zurich on the manipulation of nano-objects, **we have recently filed a patent a “Device for placing an object in at least a first and a second orientation or spatial location”** (European Patent: EP 2891006 A2, US Patent: US 20150212316 A1).

I attended several international conferences and workshops, giving about 20 oral talks myself, of which **6 are Invited Talks**. I have also co-organized 1 international Topical Meeting and 1 national Workshop and I have participated in the scientific committee of 1 international Conference.

I am the author of **about 50** among **scientific papers and proceedings** that were subject to an international review process and collect **more than 600 citations** overall. My current **Hindex is 12** according to Scopus and Web of Science (citations > 800 and H = 14 on Google Scholar) and **my recent work has been highlighted by** the scientific press and by other high impact journals such as **Nature, CE&N News, Physics Today and ACS Highlights**.

While at ETH Zurich I was involved as a teaching assistant in a Bio-photonics, Molecular Optics and Spectroscopy courses taught in English, at Politecnico di Milano I am currently assistant professor and lecturer in electromagnetism courses. I supervised several bachelor theses and **I have directly supervised 2 Ph.D. students**, who carried out their activity in the above-mentioned projects.

EDUCATION

- 2005-2008 **Ph. D. degree in Physics**
Department of Physics – Politecnico di Milano (Italy),
(Mentors: Prof. Giulio Cerullo and Prof. Sandro De Silvestri)
Ph.D. thesis title: “Near- and far-field imaging and spectroscopy of single nanoparticles”
- 2007 **Exchange PhD Student**
ETH Zurich, Laboratory of Physical Chemistry, (Research group: Prof. V. Sandoghdar)
Nano-Plasmonics
- 1998-2004 **Master degree in Electronic Engineering (94/100)**
Politecnico di Milano, Piazza Leonardo Da Vinci 32, 20133 Milano (Italy),
(Mentor: Prof. Giulio Cerullo)
Master thesis title: “Development of a near-field optical microscope coupled to ultrashort pulses”
- 1998 **Maturità scientifica (48/60)**
Liceo scientifico G. Novello, Codogno –Lodi (Italy)

RESEARCH EXPERIENCE

- 12/2011-
Present **Assistant Professor (Researcher)**
Department of Physics –Politecnico di Milano, Piazza Leonardo Da Vinci 32,
20133 Milano (Italy)
Study of linear and non-linear optical phenomena at the nanoscale
- 05/2011-
11/2011 **Post-Doc**
Department of Physics –Politecnico di Milano, Piazza Leonardo Da Vinci 32,
20133 Milano (Italy)
Study of linear and non-linear optical phenomena at the nanoscale
- 01/2009-
05/2011 **Post-Doc**
ETH Zurich, Laboratory of Physical Chemistry, (Research group: Prof. V.
Sandoghdar)
Nano-Optics and Nano-Plasmonics
- 03/2008-
07/2008 **Post-Doc**
Department of Physics –Politecnico di Milano, Piazza Leonardo Da Vinci 32, 20133
Milano (Italy)
Development of microscopy techniques for organic optoelectronic devices
diagnosis

TEACHING EXPERIENCE

- 2016 - 2017 **Lecturer** Principles of Experimental Physics: Electromagnetism
(Politecnico di Milano)
- 2015 - 2016 **Lecturer** Principles of Experimental Physics: Electromagnetism
(Politecnico di Milano)
- 2014 - 2015 **Lecturer** Principles of Experimental Physics: Electromagnetism
(Politecnico di Milano)
- 2014 - 2017 **Teaching Assistant** Physics Lab Courses (Politecnico di Milano)
- 2012 - 2014 **Supervision** of 1 Ph.D Students (Politecnico di Milano)
- 2014 - 2017 **Supervision** of 1 Ph.D Students (Politecnico di Milano)
- 2013 - 2014 **Teaching Assistant** Principles of Experimental Physics: Classical Mechanics,
Thermodynamics and Electromagnetism
(Politecnico di Milano)
- 2012 – 2013 **Teaching Assistant** Principles of Experimental Physics: Classical Mechanics,
Thermodynamics and Electromagnetism
(Politecnico di Milano)
- 2011 – 2012 **Teaching Assistant** Principles of Experimental Physics: Classical Mechanics,
Thermodynamics and Electromagnetism
(Politecnico di Milano)
- 2010 - 2011 **Supervision** of a Master Student (ETH Zurich)
- 2010 - 2011 **Teaching Assistant** Advanced Optics and Spectroscopy : Biophotonics course
(ETH Zurich)
- 2009 - 2010 **Teaching Assistant** Spectroscopy course (ETH Zurich)
- 2008 - 2009 **Teaching Assistant** Chemistry Lab courses (ETH Zurich)
- 2008 **Supervision** of a Master Student (Politecnico di Milano)
- 2006 - 2007 **Teaching Assistant** Fundamental Physics: Classical Mechanics, Thermodynamics
and Electromagnetism (Politecnico di Milano)

COMMUNITY WORK

Reviewer activity

- Nature Nanotechnology, Scientific Reports, Light: Science and Applications (NPG);
- ACS Photonics, ACSNano, Nanoletters (ACS);
- Nanoscale (RCS);
- Physical Review Letters (APS)
- Journal of Optics (IOP);
- J. Applied Physics (AIP)
- Optics Express (OSA)
- Optics Materials (Elsevier),
- Plasmonics (Springer);

Member of the Editorial Board

Matters www.sciencematters.io

Organization and scientific committee of Conferences

- Chair of the Scientific Sub-Committee for the conference “Advanced Photonics Congress” of the OSA in Zurich (Switzerland), 01-05 July 2018.
- Scientific Committee: “Optical Nanospectroscopy III”, Rome (Italy), 22-25 March 2016.
- Organizer: “Topical Meeting on Nonlinear Plasmonics and Its Applications”, Rome (Italy), March 21st 2016;
- Organizer: “Plasmonica2013”, Milan (Italy), 01-03 July 2013;

Memberships

Member of Società Italiana di Ottica e Fotonica (SIOF)

LANGUAGES

Italian	Mother tongue
English	Fluent, (TOEFL Certificate)
German	Basic (A1.1 Certificate of ETH language course)

PATENTS

“Device for placing an object in at least a first and a second orientation or spatial location”
(EP 2891006 A2, US 20150212316 A1).

FUNDED PROJECTS (as a Principal Investigator)

Project “Second HArmonic Plasmon-Enhanced Sensing (SHAPES)” (2013-0736) funded by Cariplo Foundation (200k€)

I am co-author of about 50 scientific papers published in international peer-reviewed journals and conference proceedings, in which I appear both as first/second (18) and last author (4):

SCIENTIFIC PUBLICATIONS ON INTERNATIONAL PEER-REVIEWED JOURNALS

(the candidate is underlined in the list)

1. M. Celebrano, L. Ghirardini, M. Finazzi, Y. Shimizu, Y. Tu, K. Inoue, Y. Nagai, T. Shinada, Y. Chiba, A. Abdelghafar, M. Yano, T. Tani, and E. Prati,
“1.54 μm photoluminescence from Er:Ox centers at extremely low concentration in silicon at 300 K”
OPTICS LETTERS 42, 3311-3314 (2017)
2. C. Zucchetti, F. Bottegoni, C. Vergnaud, F. Ciccacci, G. Isella, L. Ghirardini, M. Celebrano, F. Rortais, A. Ferrari, A. Marty, M. Finazzi, and M. Jamet,
“Imaging Spin diffusion in Germanium at room temperature”
PHYSICAL REVIEW B 96, 014403 (2017)
3. G. Pellegrini, M. Finazzi, M. Celebrano, L. Duò, and P. Biagioni
“Chiral Surface Waves for Enhanced Circular Dichroism”
PHYSICAL REVIEW B 95, 241402 (2017)
4. V. F. Gili, L. Carletti, F. Chouchane, G. Wang, C. Ricolleau, D. Rocco, A. Lemaître, I. Favero, L. Ghirardini, M. Finazzi, M. Celebrano, C. De Angelis, And G. Leo,
“Role of the substrate in monolithic AlGaAs nonlinear nanoantennas Nanophotonics”
NANOPHOTONICS Ahead of Print <https://doi.org/10.1515/nanoph-2017-0026>
5. L. Ghirardini, L. Carletti, V. Gili, G. Pellegrini, L. Duò, M. Finazzi, D. Rocco, A. Locatelli, C. De Angelis, I. Favero, M. Ravaro, G. Leo, A. Lemaître, and M. Celebrano
“Polarization properties of second-harmonic generation in AlGaAs optical nanoantennas”
OPTICS LETTERS 42, 559-562 (2017)
6. L. Carletti, D. Rocco, A. Locatelli, C. De Angelis, V. F. Gili, M. Ravaro, I. Favero, G. Leo, M. Finazzi, L. Ghirardini, M. Celebrano, G. Marino, A. V. Zayats
“Controlling second-harmonic generation at the nanoscale with monolithic AlGaAs-on-AlOx antennas”
NANOTECHNOLOGY 28, 114005 (2017) **Invited Paper**
7. M. Baselli, A.-L. Baudrion, L. Ghirardini, G. Pellegrini, E. Sakat, L. Carletti, A. Locatelli, C. De Angelis, P. Biagioni, L. Duò, M. Finazzi, P.-M. Adam, and M. Celebrano
“Plasmon-Enhanced Second Harmonic Generation: from Individual Antennas to Extended Arrays”
PLASMONICS 12, 1595-1600 (2017)
8. V. Giliberti, E. Sakat, M. Bollani, M. V. Altoe, M. Melli, A. Weber-Bargioni, L. Baldassarre, M. Celebrano, J. Frigerio, G. Isella, S. Cabrini and M. Ortolani
“Functionalization of scanning probe tips with epitaxial semiconductor layers”
SMALL METHODS 1600033 (2017)

9. L. Ghirardini, M. Malerba, M. Bollani, P. Biagioni, L. Duò, M. Finazzi, F. De Angelis, and M. Celebrano
“Nonlinear emission from silver-coated 3D hollow nanopillars”
NANOSPECTROSCOPY 2, 15-23 (2016)
10. G. Pellegrini, M. Celebrano, M. Finazzi, and P. Biagioni
“Local Field Enhancement: Comparing Self-Similar and Dimer Nanoantennas”
JOURNAL OF PHYSICAL CHEMISTRY C 120, 26021–26024 (2016)
11. V. F. Gili, L. Carletti, A. Locatelli, D. Rocco, M. Finazzi, L. Ghirardini, I. Favero, C. Gomez, A. Lemaître, M. Celebrano, C. De Angelis, and G. Leo
“Monolithic AlGaAs second-harmonic nanoantennas”
OPTICS EXPRESS 24, 15965-15971 (2016)
12. L. Ghirardini, T. Virgili, S. Bolis, M. Finazzi, and M. Celebrano
“The role of segregation in the polarized emission from polyfluorene embedded in a liquid crystal”
J. POLYM. SCI., PART B: POLYM. PHYS. 54, 1558–1563 (2016) **Cover Paper**
13. C. J. Myers, M. Celebrano, and M. Krishnan
“Information storage and retrieval in a single levitating colloidal particle”
NATURE NANOTECHNOLOGY 10, 886–891 (2015)
Highlights: NATURE 524, 391 (2015)
14. M. Celebrano, X.F. Wu, M. Baselli, S. Grossmann, P. Biagioni, A. Locatelli, C. De Angelis, G. Cerullo, R. Osellame, B. Hecht, L. Duò, F. Ciccacci, and M. Finazzi
“Mode matching in multiresonant plasmonic nanoantennas for enhanced second harmonic generation”
NAT. NANOTECHNOLOGY 10, 412-417 (2015)
15. M. Finazzi, P. Biagioni, M. Celebrano, and L. Duò
“Quasistatic limit for plasmon-enhanced optical chirality”
PHYS. REV. B 91, 195427 (2015)
16. S. Bolis, M. Celebrano, L. Ghirardini, M. Finazzi, C. Botta, J. Beeckman, P. Kockaert, T. Virgili
“Optical gain from polyfluorene keto defects in a liquid crystal mixture”
CHEMICAL COMMUNICATION 51, 9686-9689 (2015)
17. M. Celebrano, M. Baselli, M. Bollani, J. Frigerio, A. Bahgat Shehata, A. Della Frera, A. Tosi, A. Farina, F. Pezzoli, J. Osmond, X. Wu, B. Hecht, R. Sordan, D. Chrastina, G. Isella, L. Duò, M. Finazzi, and P. Biagioni
“Emission engineering in germanium nanoresonators”
ACS PHOTONICS 2, 53-59 (2015)
18. V. Kumar, N. Coluccelli, M. Cassinerio, M. Celebrano, A. Nunn, M. Levrero, T. Scopigno, G. Cerullo, M. Marangoni
“Low-noise, vibrational phase-sensitive chemical imaging by balanced detection RIKE”
J. RAMAN SPECTROSCOPY 46, 109-116 (2015)

19. F. Bottegoni, M. Celebrano, M. Bollani, P. Biagioni, G. Isella, F. Ciccacci, and M. Finazzi
“Spin Photovoltaic Cell”
NATURE MATERIALS 13, 790-795 (2014)
20. M. Celebrano, C. Rosman, C. Sönnichsen, and M. Krishnan
“Angular Trapping of Anisometric Nano-Objects in a Fluid”
NANO LETTERS 12, 5791-5796 (2012)
21. M. Savoini, X. Wu, M. Celebrano, J. Ziegler, P. Biagioni, S. C. J. Meskers, L. Duò, B. Hecht, and M. Finazzi
“Circular Dichroism Probed by Two-Photon Fluorescence Microscopy in Enantiopure Chiral Polyfluorene Thin Films”
J. AM. CHEM. SOC. 134, 5832-5835 (2012)
Selected JACS Spotlights
22. C. Sciascia, M. Celebrano, M. Binda, D. Natali, G. Lanzani, and J. R. Cabanillas-Gonzalez
“Electric field and charge distribution imaging with sub-micron resolution in an organic Thin-Film Transistor”
ORGANIC ELECTRONICS 13, 66-70 (2012)
23. G. Grancini, N. Martino, M.-R. Antognazza, M. Celebrano, H.-J. Egelhaaf, and G. Lanzani
“Influence of Blend Composition on Ultrafast Charge Generation and Recombination Dynamics in Low Band Gap Polymer-Based Organic Photovoltaics”
J. PHYS. CHEM. C 116, 9838-9844 (2012).
24. M. Celebrano, P. Kukura, A. Renn, and V. Sandoghdar
“Single-molecule Imaging by Optical Absorption”
NATURE PHOTONICS 5, 95-98 (2011)
News & Views: J. Hofkens and M. B. J. Roeffaers: “Single-molecule light absorption”, NATURE PHOTONICS 5, 80-81 (2011)
25. P. Kukura, M. Celebrano, A. Renn, and V. Sandoghdar
“Single-Molecule Sensitivity in Optical Absorption at Room Temperature”
J. PHYS. CHEM. LETT. 1, 3323–3327 (2010)
Highlights: PHYSICS TODAY, Dec. Issue, 20 (2010), NATURE METHODS 8, 14 (2010)
26. M. Celebrano, R. Lettow, P. Kukura, M. Agio, A. Renn, S. Götzinger, and V. Sandoghdar
“Efficient coupling of single photons to single plasmons”
OPTICS EXPRESS 18, 13829 (2010)
27. D. Polli, G. Grancini, J. Clark, M. Celebrano, T. Virgili, G. Cerullo and G. Lanzani
“Nanoscale Imaging of the Interface Dynamics in Polymer Blends by Femtosecond Pump-Probe Confocal Microscopy”
ADV. MATER. 22, 3048 (2010)
28. M. Celebrano, M. Savoini, P. Biagioni, M. Zavelani-Rossi, P.-M. Adam, L. Duò, G. Cerullo, and M. Finazzi

- “Retrieving the Complex Polarizability of Single Plasmonic Nanoresonators”
PHYS. REV. B 80, 153407 (2009)
29. M. Celebrano, C. Sciascia, M. Zavelani-Rossi, G. Cerullo, G. Lanzani, and J. Cabanillas-Gonzalez
“Imaging the Electric-Field Distribution in Organic Devices by Confocal Electroreflectance Microscopy”
ADV. FUNCT. MAT. 19, 1180 (2009)
30. M. Celebrano, P. Biagioni, M. Zavelani-Rossi, D. Polli, M. Labardi, M. Allegrini, M. Finazzi, L. Duò, and G. Cerullo
“Hollow-pyramid based scanning near-field optical microscope coupled to femtosecond pulses: A tool for nonlinear optics at the nanoscale”
REV. SCI. INSTR. 80, 033704 (2009)
31. P. Biagioni, M. Celebrano, M. Savoini, G. Grancini, D. Brida, S. Matefi-Tempfli, M. Matefi-Tempfli, L. Duò, B. Hecht, G. Cerullo, and M. Finazzi
“Dependence of the two-photon photoluminescence yield of gold nanostructures on the laser pulse duration”
PHYS. REV. B 80, 045411 (2009)
32. P. Kukura, M. Celebrano, A. Renn, and V. Sandoghdar
“Seeing a single quantum emitter when it is dark”
NANO LETTERS 9, 926 (2009). **Cover Paper**
Highlights: NATURE PHOTONICS 2, 590 (2008), NATURE PHYSICS 5, 9 (2009)
33. M. Celebrano, M. Zavelani-Rossi, D. Polli, P. Biagioni, M. Finazzi, L. Duò, M. Labardi, M. Allegrini, J. Grand, P.-M. Adam, and G. Cerullo
“Mapping local field enhancements at nanostructured metal surfaces by second –harmonic generation induced in the near field”
J. MICROSCOPY 229, 233 (2008)
34. M. Zavelani-Rossi, M. Celebrano, M. Labardi, J. Grand, D. Polli, P. Biagioni, M. Finazzi, L. Duò, M. Allegrini, P.-M. Adam, and G. Cerullo
“Near-field second-harmonic generation in single gold nanoparticles”
APPL. PHYS. LETT. 92, 093119 (2008)
35. M. Finazzi, P. Biagioni, M. Celebrano, and L. Duò
“Selection rules for second harmonic generation in nanoparticles”
PHYS. REV. B 76, 125414 (2007)
36. P. Biagioni, M. Celebrano, M. Zavelani-Rossi, M. Labardi, D. Polli, M. Finazzi, L. Duò, G. Lanzani, and G. Cerullo
“High-resolution imaging of local oxidation in polyfluorene thin films by nonlinear near-field microscopy”
APPL. PHYS. LETT. 91, 191118 (2007)

M. Celebrano, L. Duò, M. Finazzi

“Nonlinear optical processes and spectroscopies”

To appear in “Nanoscopy and Nanospectroscopy Vol. 1” edited by M. Fleisher and P.-M. Adam. De Gruyter.

CONFERENCE PROCEEDINGS

1. C. De Angelis, V. F. Gili, L. Carletti, D. Rocco, A. Locatelli, L. Ghirardini, I. Favero, C. Gomez, A. Lemaître, M. Finazzi, M. Celebrano, and G. Leo
“Second Harmonic Generation in AlGaAs Nanoantennas”
Proceeding SPIE Vol. 10111, 101111M (2017)
2. D. Polli, M. Celebrano, J. Clark, G. Grancini, T. Virgili, G. Lanzani and G. Cerullo
“Ultrafast Confocal Microscope for Functional Imaging of Organic Thin Films”
Springer Proceedings in Physics, Interface Controlled Organic Thin Films 129, 161-165 (2009)
3. D. Polli, J. Clark, M. Celebrano, G. Grancini, G. Lanzani, and G. Cerullo
“Ultrafast Confocal Microscope for Functional Imaging of Organic Thin Films”
Conference on Lasers And Electro-Optics And Quantum Electronics And Laser Science Conference (CLEO/QELS 2009), VOLS 1-5, 375-376 (2009)
4. R. Lettow, P. Kukura, M. Celebrano, Y. Rezus, S. Goetzinger, and V. Sandoghdar
“Imaging Plasmonic Nanoparticles with a Narrow-Band Single-Photon Source”
Conference on Lasers And Electro-Optics And Quantum Electronics And Laser Science Conference (CLEO/QELS 2009), VOLS 1-5, 1820-1821 (2009)
5. M. Celebrano, C. Sciascia, G. Cerullo, G. Lanzani, J. Cabanillas-Gonzalez
“High-resolution mapping of electric field inside organic optoelectronic devices”
Conference on Lasers And Electro-Optics And Quantum Electronics And Laser Science Conference (CLEO/QELS 2008), VOLS 1-9, 596-597 (2008)
6. P. Biagioni, M. Celebrano, M. Zavelani-Rossi, D. Polli, M. Labardi, G. Lanzani, G. Cerullo, M. Finazzi, and L. Duò
“A novel diagnostics for polymer degradation based on near-field two-photon photoluminescence”
Phys. Stat. Sol. (c) 5, 2587-2590 (2008)
7. M. Celebrano, M. Zavelani-Rossi, D. Polli, G. Cerullo, P. Biagioni, M. Finazzi, L. Duò, M. Labardi, M. Allegrini, J. Grand, P. Royer, and P.-M. Adam
“Near-field second-harmonic generation from resonant gold nanoparticles”
Phys. Stat. Sol. (c) 5, 2657-2661 (2008) **Cover Paper**
8. M. Celebrano, M. Zavelani-Rossi, P. Biagioni, D. Polli, M. Finazzi, L. Duò, M. Labardi, M. Allegrini, J. Grand, P.-M. Adam, and G. Cerullo
“Mapping local field distribution at metal nanostructures by near-field second-harmonic generation”
Proceedings SPIE 6641, 66411E (2007)
9. P. Biagioni, M. Celebrano, D. Polli, M. Labardi, M. Zavelani-Rossi, G. Cerullo, M. Finazzi, and L. Duò
“Nonlinear optics and spectroscopy at the nanoscale with a hollow-pyramid aperture SNOM”
J. Phys.: Conf. Series **61**, 125 (2007)

I am co-author of more than 50 contributions to national and international conferences, of which 12 are Invited talks. Among them, **I personally gave 6 Invited talks and 14 contributed oral presentation**, as detailed below. In 2013 I have co-organized and co-chaired the national workshop PLASMONICA2013, which brought more than 100 young researchers to Milan. In 2016 I have organized a topical Meeting on “Nonlinear Plasmonics and Its Applications” in Rome and I was member of the scientific committee of the international conference “Optical Nanospectroscopy III in Rome.

INVITED CONTRIBUTION TO NATIONAL AND INTERNATIONAL CONFERENCES

(the invited speaker is underlined)

1. L. Ghirardini, L. Carletti, V. Gili, G. Pellegrini, L. Duo, M. Finazzi, D. Rocco, A. Locatelli, C. De Angelis, I. Favero, M. Ravaro, G. Leo, A. Lemaitre, M. Celebrano.
“Title TBD”
SPIE Photonics West, San Francisco (USA), 27 January -1 February 2018
2. A. Locatelli, L. Ghirardini, X. Wu, S. Großmann, P. Biagioni, G. Pellegrini, L. Carletti, C. De Angelis, B. Hecht, L. Duò, M. Finazzi, M. Celebrano
“Engineering nanoantennas for efficient nonlinear photon conversion at the nanoscale”
EOS Topical Meeting, Anacapri (Italy), 10 -14 September 2017
3. L. Ghirardini, L. Carletti, V. Gili, G. Pellegrini, L. Duo, M. Finazzi, D. Rocco, A. Locatelli, C. De Angelis, I. Favero, M. Ravaro, G. Leo, A. Lemaitre, M. Celebrano
“Emission properties of second-harmonic generation in AlGaAs optical nanoantennas”
META 17, Incheon (South Korea), 25-28 July 2017
4. M. Celebrano
“Towards efficient detection of photons emitted by Er³⁺ ions in silicon”
IV Bilateral Italy-Japan Seminar - Innovative Solutions for Single Atom Applications in Photonics and Nanoelectronics, Colico (Italy), 2-4 May 2017
5. C. De Angelis, V. Gili, L. Carletti, D. Rocco, A. Locatelli, L. Ghirardini, I. Favero, C. Gomez, A. Lemaitre, M. Finazzi, M. Celebrano, and G. Leo
“Second harmonic generation in dielectric nanoantennas”
NanoPhotonics Workshop MINW, Tequisquiapan, Mexico 15 – 19 January 2017
6. C. De Angelis, V. Gili, L. Carletti, D. Rocco, A. Locatelli, L. Ghirardini, I. Favero, C. Gomez Carbonell, A. Lemaitre, M. Finazzi, M. Celebrano, and G. Leo
“Second harmonic generation in AlGaAs nanoantennas”
SPIE Photonic West, San Francisco (Ca), USA January 28 – February 2 2017
7. V. F. Gili, L. Carletti, D. Rocco, A. Locatelli, M. Ravaro, I. Favero, A. Lemaitre, L. Ghirardini, M. Finazzi, M. Celebrano, C. De Angelis, and G. Leo
“Second harmonic generation in monolithic AlGaAs nanoantennas”
NANOP2016, Paris, France 7 - 9 December 2016

8. M. Celebrano, L. Ghirardini, X. Wu, S. Großmann, P. Biagioni, G. Pellegrini, M. Baselli, A. Locatelli, C. De Angelis, G. Cerullo, R. Osellame, B. Hecht, L. Duò, F. Ciccacci, & M. Finazzi
“Mode-matching in multiresonant nanoantennas for enhanced nonlinear emission”
OSA Nonlinear Photonic Meeting, Sydney (AUS), 3-8 September 2016
9. M. Celebrano, L. Ghirardini, X. Wu, S. Großmann, P. Biagioni, G. Pellegrini, M. Baselli, A. Locatelli, C. De Angelis, G. Cerullo, R. Osellame, B. Hecht, L. Duò, F. Ciccacci, & M. Finazzi
“Mode-matching in multiresonant nanoantennas for enhanced nonlinear emission”
META 16, Malaga (Spain), 25-28 July 2016
10. M. Celebrano, X. Wu, M. Baselli, S. Großmann, P. Biagioni, A. Locatelli, C. De Angelis, G. Cerullo, R. Osellame, B. Hecht, L. Duò, F. Ciccacci, and M. Finazzi
“Enhanced second-harmonic generation from multiresonant plasmonic nano-structures”
OSI 11 Conference, Austin (TX) USA, 28 June-3 July 2015
11. G. Cerullo, M. Celebrano, M. Zavelani-Rossi, P. Biagioni, M. Finazzi, and L. Duò
“Near-field second harmonic generation from single gold nanoparticles”
DPG Spring Meeting, Regensburg (DE), 26-30 March 2007
12. M. Celebrano, M. Zavelani-Rossi, D. Polli, P. Biagioni, M. Finazzi, L. Duò, M. Labardi, M. Allegrini, J. Grand, P.-M. Adam, and G. Cerullo
“Mapping local field distribution at metal nanostructures by near-field second-harmonic generation”
SPIE Photonic West 2007

ORAL CONTRIBUTIONS (personally presented by the author)

1. “Title TBD”
SPIE Photonics West, San Francisco (USA), 27 January -1 February 2018. **Invited Talk**
2. “Engineering nanoantennas for efficient nonlinear photon conversion at the nanoscale”
EOS Topical Meeting, Anacapri (Italy), 10 -14 September 2017. **Invited Talk**
3. “Emission properties of second-harmonic generation in AlGaAs optical nanoantennas”
META 17, Incheon (South Korea), 25-28 July 2017. **Invited Talk**
4. “Towards efficient detection of photons emitted by Er³⁺ ions in silicon”
IV Bilateral Italy-Japan Seminar - Innovative Solutions for Single Atom Applications in Photonics and Nanoelectronics, Colico (Italy), 2-4 May 2017. **Invited Talk**
5. “Mode-matching in multiresonant nanoantennas for enhanced nonlinear emission”
OSA Nonlinear Photonic Meeting, Sydney (AUS), 3-8 September 2016. **Invited Talk**
6. “Mode-matching in multiresonant nanoantennas for enhanced nonlinear emission”
META16, Malaga (Spain), 25-28 July 2016. **Invited Talk**

7. "Mode matching in multiresonant plasmonic nanoantennas for enhanced second harmonic generation"
ICES 2015, Messina (Italy), October 12-15, 2015.
8. "Mode matching in multiresonant plasmonic nanoantennas for enhanced second harmonic generation"
SCIENCE CAMP 2015, Cumberland Lodge, Windsor Great Park (UK), August 18-21, 2015.
9. "Optical generation of highly-confined complementary spin populations: the spin photovoltaic cell"
MRS Fall Meeting, Boston (USA), November 30 – December 5 2014.
10. "Angular Trapping of Anisometric Nano-Objects in a Fluid"
FisMat2013, Milano (Italy), 9-13 September 2013.
11. "Angular Trapping of Anisometric Nano-Objects in a Fluid"
12th International Conference on Near-field Optics and related topics (NFO 12), San Sebastian (Spain), 3-7 September 2012.
12. "Single-molecule imaging by optical absorption at room temperature"
CLEO Europe Conference, München (Germany), 22-26 May 2011.
13. "Single-molecule imaging by optical absorption at room temperature"
NANOMETA Conference, Seefeld (Austria), 3-6 January 2011.
14. "Linear and nonlinear near-field spectroscopy of metal nanoparticles using hollow-pyramid probes"
10th International Conference on Near-field Optics and related topics (NFO10), Buenos Aires (Argentina), 1-5 September 2008.
15. "Extinction imaging of a single Quantum Emitter in its bright and dark states at ambient conditions"
International Conference on Near-field Optics and related topics (NFO10), Buenos Aires (Argentina), 1-5 September 2008.
16. "Confocal mapping of electric field inside organic semiconductors"
E-MRS 2008 Spring Meeting, Strasbourg (FRANCE), 26-30 May 2008.
17. "Nonlinear Near-Field Microscopy: a Tool for Local Field Enhancements Investigation at Metal Nanostructures"
Italian Workshop on Optics and Photonics (IWOP07), Ancona, (Italy) 30 May-1 June 2007.
Best Talk Award

OTHER CONTRIBUTIONS TO NATIONAL AND INTERNATIONAL CONFERENCES

1. "Mode matching in multiresonant plasmonic nanoantennas for enhanced second harmonic generation"
PLASMONICA 2015, Padova (Italy), July 1-3, 2015.
2. M. Celebrano, M. Baselli, X. Wu, S. Grossmann, P. Biagioni, A. Locatelli, C. De Angelis, G. Cerullo, F. Ciccacci, B. Hecht, L. Duò, and M. Finazzi
"Multiresonant nanoantennas for efficient and highly tunable second harmonic generation"
MRS Fall Meeting, Boston (USA), November 30 – December 5 2014.
3. M. Celebrano, M. Baselli, M. Bollani, J. Frigerio, A. Bahgat Shehata, A. Della Frera, A. Tosi, A. Farina, F. Pezzoli, J. Osmond, X. Wu, B. Hecht, R. Sordan, D. Chrastina, G. Isella, L. Duò, and M. Finazzi
"Enhanced emission in Ge antennas for telecom wavelengths"
MRS Fall Meeting, Boston (USA), November 30 – December 5 2014.
4. M. Celebrano, M. Baselli, M. Bollani, J. Frigerio, A. Bahgat Shehata, A. Della Frera, A. Tosi, A. Farina, F. Pezzoli, J. Osmond, X. Wu, B. Hecht, R. Sordan, D. Chrastina, G. Isella, L. Duò, M. Finazzi, and P. Biagioni
"Ge nanoantennas for enhanced emission at telecom wavelengths"
13th International Conference on Near-field Optics, Nanophotonics and Related Techniques (NFO 13), Salt Lake City (USA), August 31 – September 4, 2014.
5. M. Baselli, M. Celebrano, P. Biagioni, X. Wu, B. Hecht, L. Duò, and M. Finazzi
"Near-field scattering analysis of gold gap nanoantennas"
PLASMONICA2014, Roma (Italy), June 30 – July 2, 2014.
6. M. Baselli, M. Celebrano, P. Biagioni, X. Wu, B. Hecht, L. Duò, and M. Finazzi
"Near-field scattering analysis of gold gap nanoantennas"
Italian National Conference on Condensed Matter Physics FisMat2013, Milano (Italy), 9-13 September 2013.
7. M. Celebrano, M. Savoini, P. Biagioni, G. Della Valle, M. Cantoni, A. Cattoni, D. Petti, B. Hecht, R. Bertacco, M. Finazzi, and L. Duò
"Anomalous propagation of surface plasmon polaritons in thin gold films on transparent substrates"
PLASMONICA2013, Milano (Italy), 1-3 July 2013.
8. "Imaging single molecules at room temperature by optical absorption"
CIMST Microscopy Colloquium, Zürich (Switzerland) 30/09/2010.
9. "High sensitivity nanoscopy via interferometric scattering microscopy"
Swiss Soft Days 2nd Workshop, Lausanne (Switzerland) 23/06/2010.
10. "Sensing and tracking non-fluorescent nanoparticles via interferometric scattering microscopy (iSCAT)"
Workshop on Nano-diagnostic and Emerging Research, Milan (Italy) 19/11/2009.