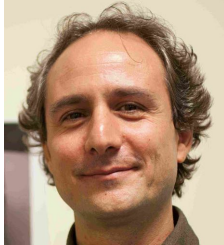


# Curriculum Vitae

## PERSONAL INFORMATION



**Fernando Brandi**

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✉ fernando.brandi@ino.cnr.it – fernando.brandi@cnr.it - fbrandi2000@gmail.com

Sex Male | Date of birth 21/04/1971 | Nationality Italian

## WORK EXPERIENCE

From 01/01/2023 to today

### Full time Senior Researcher

Intense Laser Irradiation Laboratory, Istituto Nazionale di Ottica-CNR, SS-PISA (Italy)

- ) Ultra-intense laser-matter interaction, laser-plasma acceleration,
- ) Applied research and technology transfer activity
- ) Design and development of optical diagnostic techniques for plasma and gas targets;
- ) Support in the development and management of ultra-intense laser-plasma interaction facility;

From 03/02/2014 to  
31/12/2022

### Full time Researcher

Intense Laser Irradiation Laboratory, Istituto Nazionale di Ottica-CNR, SS-PISA (Italy)

- ) Design and development of optical diagnostic techniques for plasma and gas targets;
- ) Support in the development and management of ultra-intense laser-plasma interaction facility;
- ) Green synthesis of colloidal nanoparticles solution by pulsed laser ablation in liquid;
- ) Advanced additive and subtractive Laser Micro/Nano fabrication;
- ) Applied research and technology transfer activity

From 15/07/2008 to  
02/02/2014

### Full time Researcher

Nanophysics Department, Istituto Italiano di Tecnologia-Genova (Italy)

Responsible of the Laser Laboratory.

He set-up and managed a new high-power laser laboratory for multidisciplinary applications.

Specific activities were:

- ) Laser laboratory management: procurement of equipment and maintenance, implementing safety procedures, and coordinating multidisciplinary research supervising Post-docs and PhD and Internship students.
- ) Development of novel quantitative phase imaging technique for label-free imaging and optical metrology of dispersive materials, (e.g., biological samples, neutral gases and plasma);
- ) Laser based green syntheses of bio-functionalized nanoparticles;
- ) Laser processing of thin films (e.g., metals and single layer graphene), polymers and hard materials (e.g., silicon and diamond) for lab-on-a-chip development;
- ) Fabrication and characterization of 3D bio-compatible and biodegradable scaffolds via novel layer-by-layer stereolithography methods;

From 01/09/2007 to  
14/07/2008

### Full time Post-Doc fellow

Physics Department, University of Pisa (Italy)

Design, install and run diagnostic techniques for burning plasma. Specifically, he was in charge of the installation of interferometric and spectroscopic diagnostics on a new plasma machine at the TriAlphaEnergy Inc. company (Irvine, USA).

- From 01/09/2006 to 31/08/2007 **Full time Post-Doc fellow**  
 Consorzio Nazionale Inter-Universitario Scienze Fisiche della Materia (CNISM) at the Physics Department, University of Pisa (Italy)  
 Experimental and theoretical investigation of harmonic generation with short intense laser pulses. In particular, he studied the influence of plasma dynamics on the harmonic spectral purity.
- From 01/01/2006 to 31/08/2006 **Full time Post-Doc fellow**  
 Physics Department, University of Pisa (Italy)  
 Development of novel interferometric diagnostic techniques for plasma. Specifically, he design and developed a novel dispersion interferometer with high sensitivity and high temporal resolution using both pulsed and continuous wave laser sources. Write proposals for industrial collaborations and management of projects.
- From 01/08/2004 to 31/07/2005 **Full time Post-Doc fellow**  
 Physics Department, University of Pisa (Italy)  
 Development of an experimental apparatus to perform laser ablation and study the plasma dynamics in the ablated plume.
- From 01/01/2000 to 31/07/2004 **Research Assistant**  
 Laser Center-Vrije Universiteit Amsterdam (The Netherlands)  
 Research activity in the field of optical harmonic generation in gases and plasma, and high-resolution XUV laser spectroscopy.
- From 01/07/1998 to 31/12/1999 **Full time Post-graduate fellow**  
 Italian National Institute for Nuclear Physics (INFN), Pisa (Italy)  
 Design, build and test an original ultra-high-vacuum compatible polarization modulator device.
- From 01/05/1997 to 31/08/1997 **Collaborator**  
 Physics Department, University of Pisa (Italy)  
 Design and test an original ultra-high-vacuum chamber to host the high-sensitivity ellipsometer and optical cavity to measure the magnetic vacuum birefringence.
- From 01/05/1996 to 30/04/1997 **Full time Under-graduate Fellow**  
 Italian National Institute for Nuclear Physics (INFN), National Laboratory of Legnaro (Padova, Italy)  
 Build and test the prototype ellipsometer and optical cavity of the experimental apparatus to measure the magnetic vacuum birefringence.

## EDUCATION

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- 01/07/2004 **PhD in Physics**  
 Laser Center-Vrije Universiteit Amsterdam (The Netherlands)  
 Thesis title "Table-top XUV sources for high resolution spectroscopy: from low to high-order harmonic generation"
- 20/03/1997 **First-Class Honours Degree in Physics (Laurea cum Laude)**  
 Physics Department-University of Pisa (Italy)  
 Thesis title "Prototype of an apparatus to measure vacuum polarization"

- Academic year 1993-1994 **Erasmus student at the University of Edinburgh**  
 Faculty of Science and Engineering  
 Classes: Experimental Physics, third year, mark 82%; Quantum Physics and Atomic and molecular Physics, third year, mark 81%; Nuclear Physics 1 and 2, fourth year, mark 87%.

## PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

English

French

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
Excellent	Excellent	Excellent	Excellent	Excellent
Good	Good	Basic	Basic	Basic

Communication skills

Excellent communication skills gained through experience in international working environments and coordinated team activities.

List of scientific publicationsH-index: 32 from Google Scholar, 29 from Scopus.

2021 - Fabrication of ZnO-nanowire-coated thin-foil targets for ultra-high intensity laser interaction experiments

D Calestani, M Villani, G Cristoforetti, **F Brandi**, P Koester, L Labate, LA Gizzi

Matter and Radiation at Extremes 6 (4), 046903

2021 - Enhanced laser-driven proton acceleration via improved fast electron heating in a controlled pre-plasma

LA Gizzi, E Boella, L Labate, F Baffigi, PJ Bilbao, **F Brandi**, G Cristoforetti, A Fazzi, L Fulgentini, D Giove, P Koester, D Palla, P Tomassini

Scientific Reports 11, 13728

2021 - A Few MeV Laser-Plasma Accelerated Proton Beam in Air Collimated Using Compact Permanent Quadrupole Magnets

**F Brandi**, L Labate, D Palla, S Kumar, L Fulgentini, P Koester, F Baffigi, M Chiari, D Panetta, LA Gizzi

Applied Sciences 11 (14), 6358

2021 - Overview and specifications of laser and target areas at the Intense Laser Irradiation Laboratory

LA Gizzi, L Labate, F Baffigi, **F Brandi**, G Bussolino, L Fulgentini, P Köster, D. Palla

High Power Laser Science and Engineering 9, e10

2020 - Erratum to: EuPRAXIA Conceptual Design Report

RW Assmann, et al.

The European Physical Journal Special Topics 229 (1), 11-31

2020 - EuPRAXIA conceptual design report

RW Assmann, et al.

The European Physical Journal Special Topics 229 (24), 3675-4284

2020 - Toward an effective use of laser-driven very high energy electrons for radiotherapy: Feasibility assessment of multi-field and intensity modulation irradiation schemes

L Labate, D Palla, D Panetta, F Avella, F Baffigi, **F Brandi**, F Di Martino, L. Fulgentini, A. Giulietti, P. Köster, D. Terzani, P. Tomassini, C. Traino, LA Gizzi

Scientific Reports 10, 17307

2020 - Laser-driven proton acceleration via excitation of surface plasmon polaritons into TiO<sub>2</sub> nanotube array targets

G Cristoforetti, F Baffigi, **F Brandi**, G D'Arrigo, A Fazzi, L Fulgentini, D Giove, P Koester, L Labate, G Maero, D Palla, M Romé, R Russo, D Terzani, P Tomassini, LA Gizzi

Plasma Physics and Controlled Fusion 62 (11), 114001

2020 - Intense proton acceleration in ultrarelativistic interaction with nanochannels

LA Gizzi, G Cristoforetti, F Baffigi, **F Brandi**, G D'Arrigo, A Fazzi, L Fulgentini, D Giove, P Koester, L Labate, G Maero, D Palla, M Romé, M Russo, D Terzani, P Tomassini

Physical Review Research 2 (3), 033451

2020 - Experimental study on the performances of second-harmonic dispersion interferometers at 10.6  $\mu\text{m}$  and 1064 nm for plasma density measurements

**F Brandi**, F Wessel, CM Lohff, JR Duff, ZO Haralson

Applied Optics 59 (27), 8486-8493

2020 - Widefield quantitative phase imaging by second-harmonic dispersion interferometry

**F Brandi**, F Wessel

Optics Letters 45 (15), 4304-4307

2020 – **F. Brandi**, L. Labate, D. Rapagnani, R. Buompane, A. di Leva, L. Gialanella, and L. A. Gizzi

Optical and spectroscopic study of a supersonic flowing helium plasma: energy transport in the afterglow

Scientific Reports, 10 (1), 5087

2019 – **F. Brandi**, L. A. Gizzi

Optical diagnostics for density measurement in high-quality laser-plasma electron accelerators

High Power Laser Science and Engineering 7, e26

2019 - P Tomassini, D Terzani, F Baffigi, **F Brandi**, L Fulgentini, P Koester, L Labate, D Palla, L. A. Gizzi

High-quality 5 GeV electron bunches with resonant multi-pulse ionization injection

Plasma Physics and Controlled Fusion 62 014010

2018 – X. Chen, Y. Zhao, X. Li, Z. Xiao, Y. Yao, Y. Chu, B. Farkas, I. Romano, **F. Brandi** and J. Dai

Functional multichannel poly(propylene fumarate)-collagen scaffold with collagen-binding neurotrophic factor 3 promotes neural regeneration after transected spinal cord injury

*Adv. Healthcare Mater.* 7, 1800315

2018 - **F. Brandi**, F. Giammanco, F. Conti, F. Sylla, G. Lambert, and L. A. Gizzi

Measurement of the particle number density in a pulsed flow gas cell with a second-harmonic interferometer"

*J. Phys.: Conf. Ser.*, 'The proceedings of the 6th Target Fabrication Workshop (TFW6) and the Targetry for High Repetition Rate Laser-Driven Sources (Targ3) Conference'

*J. Phys.: Conf. Ser.*, **1079** 012006

2018- L.A.Gizzi, F.Baffigi, **F.Brandi**, G.Bussolino, G.Cristoforetti, A.Fazzi, L.Fulgentini, D.Giove, P.Koester, L.Labate, G.Maero, D.Palla, M.Romé, and P.Tomassini

Light Ion Accelerating Line (L3IA): Test experiment at ILIL-PW

*Nuclear Instruments and Methods in Physics Research A*, **909**, 160-163

2018 – M.Ferrario et. al.

EuPRAXIA@SPARC\_LAB Design study towards a compact FEL facility at LNF

*Nuclear Instruments and Methods in Physics Research* , **909**, 134-138

2017 - P A Walker et. al.

Horizon 2020 EuPRAXIA design study

*J. Phys.: Conf. Ser.* **874** 012029

2017 – L. A. Gizzi, D. Giove, C. Altana, **F. Brandi**, P. Cirrone, G. Cristoforetti A. Fazzi, P. Ferrara, L. Fulgentini, P. Koester, L. Labate, G. Lanzaone,

P. Londrillo, D. Mascali, A. Muoio, D. Palla, F. Schillaci, S. Sinigardi, S. Tudisco, and G. Turchetti

A new Line for Laser driven Light Ions Acceleration and related TNSA studies

*Applied Sciences* 7 (10), 984

2017 - C. Altana, S. Tudisco, G. Lanzaone, D. Mascali, A. Muoio, **F. Brandi**, G. Cristoforetti, P. Ferrara, L. Fulgentini, P. Koester, L. Labate, D. Pallae and L. Gizzi

Experimental investigation of ion production and acceleration mechanism in laser-produced plasma at moderate intensity for nuclear studies @ ELI-NP

*Journal of Instrumentation* **12** C04011

2017 – A Zsedenyi, B Farkas, G N. Abdelrasoul, I Romano, E Gyukity-Sebestyen, K Nagy, M Harmati, G Dobra, S Korondi, G Decsi, I B Nemeth, A Diaspro, **F Brandi**, S Beke, K Buzas

Gold nanoparticle-filled biodegradable photopolymer scaffolds induced muscle remodeling: in vitro and in vivo findings

*Materials Science and Engineering C*, **72**, 625–630

2017 - B. Farkas, S. Dante, and **F. Brandi**

Photoinitiator-free 3D scaffolds fabricated by excimer laser photocuring

*Nanotechnology*, **28**, 034001, <http://dx.doi.org/10.1088/1361-6528/28/3/034001>

2016 - **F. Brandi**, F. Giammanco, F. Conti, F. Sylla, G. Lambert, and L. A. Gizzi

Real-time monitoring via second-harmonic interferometry of a flow gas cell for laser wakefield acceleration

*Review of Scientific Instruments*, **87**, 086103; <http://dx.doi.org/10.1063/1.4960399>

2016 - D Palla, F Baffigi, **F. Brandi**, L Fulgentini, P Koester, L Labate, P Londrillo, LA Gizzi

Comparison of Self-Injection Thresholds in He and N<sub>2</sub> and Role of Self-Focusing in LWFA

*Nuclear Instruments and Methods in Physics Research A*, **829**, 408-412, doi:10.1016/j.nima.2016.03.109

- 2016 - C. Altana, A. Muoio, G. Lanzalone, S. Tudisco, **F. Brandi**, G.A.P. Cirrone, G. Cristoforetti, A. Fazzi, P. Ferrara, L. Fulgentini, D. Giove, P. Koester, L. Labate, D. Mascali, D. Palla, F. Schillaci, L.A. Gizzi  
Investigation of ion acceleration mechanism through laser-matter interaction in femtosecond domain  
*Nuclear Instruments and Methods in Physics Research A*, **829**, 159-162, doi:10.1016/j.nima.2016.02.016
- 2016 - L.A. Gizzi, C. Altana, **F. Brandi**, P. Cirrone, G. Cristoforetti, A. Fazzi, P. Ferrara, L. Fulgentini, D. Giove, P. Koester, L. Labate, G. Lanzalone, P. Londrillo, D. Mascali, A. Muoio, D. Palla, F. Schillaci, S. Sinigardi, S. Tudisco, G. Turchetti  
Role of laser contrast and foil thickness in target normal sheath acceleration  
*Nuclear Instruments and Methods in Physics Research A*, **829**, 144-148, doi:10.1016/j.nima.2016.01.036
- 2016 - S. Tudisco, C. Altana, G. Lanzalone, A. Muoio, G.A.P. Cirrone, D. Mascali, F. Schillaci, **F. Brandi**, G. Cristoforetti, P. Ferrara, L. Fulgentini, P. Koester, L. Labate, D. Palla, L.A. Gizzi  
Investigation on Target Normal Sheath Acceleration through the measure of Ions energy distribution  
*Review of Scientific Instruments* **87** 02A909
- 2015 - I. Romano, F. Ayadi, L. Rizzello, M. Summa, R. Bertorelli, P.P. Pompa, **F. Brandi**, I. Bayer, and A. Athanassiou  
Passive to Active Tuning of Wound Dressings: Controlled Drug Release from Hydrogel Modified Fibrous Substrates,  
*Carbohydrate Polymers* **131** 306–314
- 2015 - B. Farkas, I. Romano, L. Ceseracciu, **F. Brandi** and S. Beke  
Four-order stiffness variation of laser-fabricated photopolymer biodegradable scaffolds by modulating the laser parameters  
*Materials Science and Engineering C* **55** 14–21
- 2015 - A. Milionis, D. Fragouli, **F. Brandi**, I. Liakos, S. Barroso, R. Ruffilli and A. Athanassiou  
Superhydrophobic/Superoleophilic Magnetic Elastomers by Laser Ablation  
*Applied Surface Science* **351** 74–82
- 2015 - L. A. Gizzi, L. Labate, F. Baffigi, **F. Brandi**, G. C. Bussolino, L. Fulgentini, P. Koester, D. Palla, F. Rossi  
Laser-plasma acceleration of electrons for radiobiology and radiation sources  
*Nuclear Instruments & Methods In Physics Research B* **355** 241–245
- 2015 - E. Maccioni, M. Morganti, and **F. Brandi**  
Strain sensitivity comparison between fiber Bragg gratings inscribed on 125 and 80 micron cladding diameter fibers, case study on the solidification monitoring of a photo-curable resin  
*Review of Scientific Instruments* **86** 026106, doi: 10.1063/1.4908573.
- 2015 - B. Farkas, A. Zsedenyi, E. Gyukity-Sebestyen, I. Romano, K. Nagy, A. Diaspro, **F. Brandi**, K. Buzas and S. Beke  
Excimer laser-produced biodegradable photopolymer scaffolds do not induce immune rejection in vivo  
*Journal of Laser Micro/Nanoengineering* **10** 11-14.
- 2014 - R. Barenghi, S. Beke, I. Romano, P. Gavazzo, B. Farkas, M. Vassalli, **F. Brandi** and Silvia Scaglione  
Elastin-coated biodegradable photopolymer scaffolds for tissue engineering applications  
*BioMed Research International* **2014** 624645, <http://dx.doi.org/10.1155/2014/624645>
- 2014 - S. Beke, B. Farkas, I. Romano and **F. Brandi**  
3D scaffold fabrication by Mask Projection Excimer laser Stereolithography  
*OPTICAL MATERIAL EXPRESS* **4** 2032-2041
- 2014 - S. Beke, R. Barenghi, B. Farkas, I. Romano, L. Kőrösi, S. Scaglione and **F. Brandi**  
Improved cell activity on biodegradable photopolymer scaffolds using titanate nanotube coatings  
*MATERIALS SCIENCE and ENGINEERING C* **44** 38-43
- 2014 - M. Lau, I. Haxhijaj, P. Wagoner, R. Intartaglia, **F. Brandi**, J. Nakamura and S. Barcikowski  
Ligand-free gold atom clusters adsorbed on graphene nano sheets generated by oxidative laser fragmentation in water  
*CHEMICAL PHYSICS LETTERS* **610–611** 256–260
- 2014 - M. Manca, S. Beke, L. De Marco, P. Pareo, A. Qualtieri, A. Cannavale, **F. Brandi**, and G. Gigli  
3D Photoelectrode for Dye Solar Cells Realized by Laser Micromachining of Photosensitive Glass  
*JOURNAL OF PHYSICAL CHEMISTRY C* **118** 17100–17107
- 2014 - R. Intartaglia, K. Bagga, and **F. Brandi**  
Study on the productivity of silicon nanoparticles by picosecond laser ablation in water: towards gram per hour yield  
*OPTICS EXPRESS* **22** 3117-3127
- 2014 - L. Servoli, **F. Brandi**, R. Carzino, M. Citroni, S. Fanetti, S. Lagomarsino, G. Parrini, D. Passeri, S. Sciortino, A. Scorzoni



Characterization of Silicon-On-Diamond chip with ionizing radiation  
*JOURNAL of INSTRUMENTATION* **9** C04019

2013 - S. Sciortino, **F. Brandi**, R. Carzino, M. Citroni, A. De Sio, S. Fanetti, S. Lagomarsino, E. Pace, G. Parrini, D. Passeri, A. Scorzoni, L. Servoli, L. Tozzetti  
Electrical properties of laser-bonded Silicon-On-Diamond samples  
*NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH A* **730** 159-163

2013 - M. Lorenzoni, **F. Brandi**, S. Dante, A. Giugni, and B. Torre  
Simple and effective graphene laser processing for neuron patterning application  
*SCIENTIFIC REPORTS* **3** 1954

2013 - K. Bagga, A. Barchanski, R. Intartaglia, S. Dante, R. Marotta, A. Diaspro, C. L. Sajti and **F. Brandi**  
Laser-assisted synthesis of staphylococcus aureus protein-capped silicon quantum dots as bio-functional nanoprobe  
*LASER PHYSICS LETTERS* **10** 065603

2013 - S. Beke, L. Kőrösi, A. Scarpellini, F. Anjum, **F. Brandi**  
Titanate nanotube coatings on biodegradable photopolymer scaffolds  
*MATERIALS SCIENCE and ENGINEERING C* **33** 2460–2463

2013- F. Conti, M. Tiberi, F. Giammanco, A. Diaspro, and **F. Brandi**,  
High-spatial resolution second-harmonic interferometry,  
*LASER PHYSICS LETTERS* **10** 056003

2013- B. Harke, W. Dallari, G. Grancini, D. Fazzi, **F. Brandi**, A. Petrozza, A. Diaspro,  
Polymerization Inhibition via Triplet State Absorption for Nanoscale Lithography,  
*ADVANCED MATERIALS* **25** 904–909

2013- A. Accardo, F. Mecarini, M. Leoncini, **F. Brandi**, E. Di Cola, M. Burghammer, C. Riekel, E. Di Fabrizio.  
Fast, active droplet interaction: coalescence and reactive mixing controlled by electrowetting on a superhydrophobic surface,  
*LAB ON A CHIP* **13** 332-335

2013- S. Beke, F. Anjum, L. Ceseracciu, I. Romano, A. Athanassiou, A. Diaspro, **Brandi F.**  
Rapid fabrication of rigid biodegradable scaffolds by excimer laser mask projection technique: a comparison between 248 nm and 308 nm  
*LASER PHYSICS* **23** 035602

2013- Intartaglia R, Das G, Bagga K, Gopalakrishnan A, Genovese A, Povia M, Di Fabrizio E, Cingolani R, Diaspro A, **Brandi F.**  
Laser synthesis of ligand-free metallic nanoparticles for plasmonic applications,  
*PHYSICAL CHEMISTRY CHEMICAL PHYSICS*, **15**, 3075-3082

2013 – I. Bayer, **Brandi F.**, R. Cingolani, A. Athanassiou.  
Modification of wetting properties of laser-textured surfaces by depositing triboelectrically charged Teflon particles.  
*COLLOID AND POLYMER SCIENCE* **291** 367 – 373

2012- Beke S, Anjum F, Tsushima H, Ceseracciu L, Chierigatti E, Diaspro A, Athanassiou A, **F. Brandi**  
Towards excimer-laser-based stereolithography: a rapid process to fabricate rigid biodegradable photopolymer scaffolds.  
*JOURNAL OF THE ROYAL SOCIETY INTERFACE* **9** 3017-3026  
Note: COVER IMAGE of the November 2012 journal issue.

2012 - Beke S, Korosi L, Nanai L, **Brandi F.**  
In-situ optical emission spectroscopy of laser-induced vanadium oxide plasma in vacuum.  
*VACUUM* **86** 2002-2004

2012 - Intartaglia R, Bagga K, Scotto M, Diaspro A, **Brandi F.**  
Luminescent silicon nanoparticles prepared by ultra short pulsed laser ablation in liquid for imaging applications.  
*OPTICAL MATERIALS EXPRESS* **2** 510-518

2012 - Harke B, Bianchini P, **Brandi F.**, Diaspro A.  
Photopolymerization Inhibition Dynamics for Sub-Diffraction Direct Laser Writing Lithography.  
*CHEMPHYSICHEM* **13** 1429-1434

2012 - Intartaglia R, Barchanski A, Bagga K, Genovese A, Das G, Wagoner P, Di Fabrizio E, Diaspro A, **Brandi F.**, Barcikowski S.  
Bioconjugated silicon quantum dots from one-step green synthesis.  
*NANOSCALE*, vol. **4**, p. 1271-1274

2012 - Romuald Intartaglia, Komal Bagga, Alessandro Genovese, Athanassia Athanassiou, Roberto Cingolani, Alberto Diaspro, **Brandi F.**

Influence of organic solvent on optical and structural properties of ultra-small silicon dots synthesized by UV laser ablation in liquid.  
*PHYSICAL CHEMISTRY CHEMICAL PHYSICS*, vol. **14**, p. 15406-15411

2011 - **Brandi F**, Giammanco F.

Temporal and spatial characterization of a pulsed gas jet by a compact high-speed high-sensitivity second-harmonic interferometer.  
*OPTICS EXPRESS*, vol. **19**, p.25479-25487,

2011 - **Brandi F**, Anjum F, Ceseracciu L, Barone AC, Athanassiou A.

Rigid biodegradable photopolymer structures of high resolution using deep-UV laser photocuring.  
*JOURNAL of MICROMECHANICS and MICROENGINEERING*, vol. **21** 054007

2011 - Guo HY, et al.

Formation of a long-lived hot field reversed configuration by dynamically merging two colliding high-beta compact toroids.  
*PHYSICS OF PLASMAS*, vol. **18**, p. 056110

2011 - Intartaglia R, Bagga K, **Brandi F**, Das G, Genovese A, Di Fabrizio E, Diaspro A.

Optical Properties of Femtosecond Laser-Synthesized Silicon Nanoparticles in Deionized Water.  
*JOURNAL OF PHYSICAL CHEMISTRY C*, vol. 115, p. 5102-5107

2010 - **Brandi F**, Burdet N, Carzino R, Diaspro A.

Very large spot size effect in nanosecond laser drilling efficiency of silicon.  
*OPTICS EXPRESS*, vol. 18, p. 23488-23494,

2010 - Binderbauer MW, et al.

Dynamic Formation of a Hot Field Reversed Configuration with Improved Confinement by Supersonic Merging of Two Colliding High-beta Compact Toroids.  
*PHYSICAL REVIEW LETTERS*, vol. 105, p. 1-4,

2009 - **Brandi F**, Giammanco F, Harris WS, Roche T, Trask E, Wessel FJ.

Electron density measurements of a field-reversed configuration plasma using a novel compact ultrastable second-harmonic interferometer.  
*REVIEW OF SCIENTIFIC INSTRUMENTS*, vol. 80, 113501

2008 - **Brandi F**, Giammanco F.

Harmonic interferometry in the visible and UV, based on second- and third-harmonic generation of a 25 ps mode-locked Nd:YAG laser.  
*OPTICS LETTERS*, vol. 33, p. 2071-2073,

2008 - **Brandi F**, Giammanco F, Ubachs W.

Plasma dynamically induced frequency shifts in high-order harmonic generation in nitrogen.  
*LASER PHYSICS*, vol. 18, p. 585-591

2007 - **Brandi F**, Giammanco F.

Versatile second-harmonic interferometer with high temporal resolution and high sensitivity based on a continuous-wave Nd:YAG laser.  
*OPTICS LETTERS*, vol. 32, p. 2327-2329

2006 - **Brandi F**.

Proposed design of a polarization modulator to simultaneously and independently induce low-level ellipticity and polarization rotation.  
*MEASUREMENT SCIENCE & TECHNOLOGY*, vol. 17, p. N71-N74,

2006 - **Brandi F**, Giammanco F, Ubachs W.

Spectral redshift in harmonic generation from plasma dynamics in the laser focus.  
*PHYSICAL REVIEW LETTERS*, vol. 96, 123904

2005 - Barkauskas M, **Brandi F**, Giammanco F, Neshev D, Pirri A, Ubachs W.

A novel-type tunable and narrowband extreme ultraviolet radiation source based on high-harmonic conversion of picosecond laser pulses.  
*JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA*, vol. 144, p. 1151-1155

2005 - Giammanco F, Pirri A, **Brandi F**, Barkauskas M, Ubachs W.

Measurements of chirp-induced frequency shift in high-order harmonic generation in xenon.  
*LASER PHYSICS*, vol. 15, p. 328-333,

2003 - **Brandi F**, Neshev D, Ubachs W.

High-order harmonic generation yielding tunable extreme-ultraviolet radiation of high spectral purity.  
*PHYSICAL REVIEW LETTERS*, vol. 91,163901

2003 - **Brandi F**, Velchev I, Neshev D, Hogervorst W, Ubachs W.

A narrow-band wavelength-tunable laser system delivering high-energy 300 ps pulses in the near-infrared.



*REVIEW OF SCIENTIFIC INSTRUMENTS*, vol. 74, p. 32-37

2002 - Pielage TGP, de Lange A, **Brandi F**, Ubachs W.

Bound energy levels at the  $n=2$  dissociation threshold in HD.

*CHEMICAL PHYSICS LETTERS*, vol. 366, p. 583-587, ISSN: 0009-2614, doi: 10.1016/S0009-2614(02)01617-2

2002 - Cacciani P, **Brandi F**, Sprengers JP, Johansson A, L'Huillier A, Wahlstrom CG, Ubachs W.

Predissociation of the  $4p\ \pi\ L-1\ \pi$  Rydberg state of carbon monoxide.

*CHEMICAL PHYSICS*, vol. 282, p. 63-73

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2013 - A. Milonis, I. Bayer, D. Fragouli, **F. Brandi** and A. Athanassiou

Book Chapter title: "Combination of lithography and coating methods for surface wetting control", Book title: "Updates in Advanced Lithography", ISBN 980-953-307-530-8, Editor: Prof. Sumio Hosaka, Publisher: Intech

Fernando Brandi, 27/11/2023