

## *Curriculum Vitae, Dr. Antonino Picciotto, PhD*

**First Name:** Antonino

**Family Name:** Picciotto

**Indirizzo:**

**Telefono Uff:** 0461/314425

**Data di nascita:**

**Luogo di nascita:**

**Codice Fiscale:**

**Posizione matrimoniale:**

**Nazionalità:**

**Servizio militare:**

**E-Mail:** [picciotto@fbk.eu](mailto:picciotto@fbk.eu)

---

### ➤ Posizione attuale e interessi di ricerca in breve - 2006/2026

**Dal 2006**, il Dr. Antonino Picciotto lavora presso la Fondazione Bruno Kessler (FBK), nella divisione Micro-Nano Fabrication Facility (MNF), come ricercatore R&D e process engineer di camera bianca.

**Dal 1° gennaio 2026**, il Dr. Picciotto è responsabile della unità di ricerca *NEXT (New opportunities Exploitation: process and Technologies for sensors and devices applications)*.

**Dal 2021 al 2025** ha coordinato l'attività di ricerca e sviluppo delle camere bianche MNF come Senior Researcher. Dal luglio 2025, il Dr. Picciotto coordina l'attività Front-End dell'unità MNF.

In questo ruolo ha lavorato alla realizzazione e microfabbricazione di rivelatori di particelle e radiazioni per applicazioni scientifiche e industriali, partecipando e guidando progetti nazionali e internazionali con istituti di ricerca quali l'Istituto Nazionale di Fisica Nucleare (INFN), l'Istituto Nazionale di Astrofisica (INAF), università come il Politecnico di Milano e molte altre, oltre a società private internazionali.

Nel gruppo MNF, **dal 2006** è stato responsabile R&D dei sistemi PECVD (Plasma Enhanced Chemical Vapor Deposition), LPCVD (Low Pressure Chemical Vapor Deposition), impiantazione ionica ed ellissometria.

**Dal 2010**, il Dr. Picciotto ha guidato e coordinato per FBK un'attività pionieristica nella progettazione e realizzazione di materiali avanzati, basati e non basati su tecnologia al silicio, per applicazioni nei sistemi non convenzionali di accelerazione di particelle (laser-driven) e nei processi di fusione nucleare pulita, in collaborazione con partner europei quali il Prague Asterix Laser System (PALS), l'istituto HILASE e, in particolare, il progetto paneuropeo Extreme Light Infrastructure (ELI-ERIC) di Praga, Repubblica Ceca.

**In questo contesto, nel 2013**, vincendo un progetto europeo internazionale Laser Lab, ha guidato come Principal Investigator un team internazionale di scienziati provenienti da diversi Paesi in un esperimento pionieristico nel campo della fusione nucleare ultra-clean boro-protone laser-driven, dimostrandone per la prima volta la fattibilità mediante un avanzato target silicio-idrogeno-boro prodotto nella camera bianca della Micro-Nano Facility di FBK. L'esperimento è stato condotto presso il laboratorio PALS (Repubblica Ceca).

Il successo di questi esperimenti ha portato alla pubblicazione di diversi lavori su riviste ad alto impatto e, **nel 2016**, a una pubblicazione sulla rivista *Fusion*, in collaborazione con il Premio Nobel per la Fisica Professor Gerard Mourou.

È coinvolto, come proponente per la Fondazione Bruno Kessler, in una serie di esperimenti preliminari sulla possibilità di aumentare l'efficacia delle tecniche standard di protonterapia tramite l'iniezione della fusione ultra-clean boro-protone, in collaborazione con l'INFN-LNS, l'istituto ELI-ERIC e altri partner.

Parallelamente alle attività scientifiche, **dal 2012** il Dr. Picciotto ha lavorato e coordinato le attività di scouting, scrittura di bandi, acquisizione e collaudo di sistemi per FBK e per la facility MNF, nell'ambito di progetti quali FESR\_1 e FESR\_2 (Fondo Europeo di Sviluppo Regionale), nonché IPCEI\_ME/CT (Importanti Progetti di Comune Interesse Europeo) e WBG\_Chips Act JU (Wide Band Gap, Chips Act Joint Undertaking), per lo sviluppo e la realizzazione di nuovi laboratori e tecnologie nel campo dei processi basati su carburo di silicio, dispositivi germanio-su-silicio e integrazione. In questo ambito, dal 2024, il Dr. Picciotto coordina l'intera acquisizione di sistemi e macchinari per FBK.

➤ Formazione

**2006** Dottorato di Ricerca in Fisica Nucleare presso l'Università di Messina e l'Istituto Nazionale di Fisica Nucleare, con una tesi dal titolo: ***“Temperature characterization of plasmas generated by high power pulsed lasers”***.

Questo lavoro è stato supportato dai progetti INFN PLAIA (Plasma Laser Ablation for Ion Acceleration) e PLATONE (Plasma Laser Ablation to Obtained Near Electrical field).

Durante il dottorato ha inoltre lavorato presso l'INFN di Catania e svolto uno stage *Marie Curie Fellowship* di sei mesi (contratto n. 434/53/04) presso l'Institute of Physics della Czech Republic Science Academy (ASCR) e il centro laser PALS di Praga, Repubblica Ceca.

**2002** Laurea magistrale in Fisica Applicata, nel settore dei sistemi plasma-laser, presso l'Università di Messina e l'Istituto Nazionale di Fisica Nucleare – Laboratori Nazionali del Sud (INFN-LNS) di Catania, con una tesi dal titolo: ***“A study of non-equilibrium plasmas generated by infrared pulsed laser”***. Questo lavoro è stato supportato dal progetto INFN ECLISSE.

**1996/1997** Diploma presso l'Istituto Tecnico Nautico Statale “Caio Duilio” di Messina, specializzazione Capitani.

---

➤ Principali risultati ottenuti nella realizzazione di rivelatori

**Dall'agosto 2006**, il Dr. Picciotto è stato coinvolto presso la Fondazione Bruno Kessler, come process engineer di camera bianca di classe A, nella realizzazione di diverse tipologie di rivelatori al silicio per particelle e radiazioni, quali celle solari al silicio, fototransistor, Silicon Photo Multiplier (SiPM) e Silicon Drift Detectors (SDD) a bassissimo rumore.

In quest'ultimo settore, il Dr. Picciotto ha contribuito direttamente alla realizzazione di diversi tipi di rivelatori di grande area nell'ambito del progetto INFN-REDSOX e dei progetti ESA (European Space Agency), ASI (Italian Space Agency) e CNSA (Chinese National Space Agency), inizialmente denominati LOFT (Large Observatory For X-ray Timing) e successivamente eXTP (enhanced X-ray Timing and Polarimetry), nei quali nel 2016 il gruppo MNF ha realizzato i più grandi Silicon Drift Detectors monolitici e pienamente funzionanti al mondo.

Il Dr. Picciotto è stato visiting researcher nel 2013 e nel 2016 presso la società Horiba Ltd di Kyoto, Giappone, come consulente esperto in microtecnologie per il personale Horiba nell'ambito della realizzazione di Silicon Drift Detectors per il progetto NEXRAY-Horiba.

➤ Principali progetti scientifici e industriali nazionali e internazionali nel campo delle nanotecnologie/microtecnologie e dei rivelatori di radiazione e particelle dal 2006 a oggi:

- **NEXRAY project – Horiba ltd**  
*Description:* Microfabrication of soft X-ray detectors (silicon drift detectors) for spectroscopic applications.
- **Nano On Micro project (NAOMI)**  
*Description:* Fabrication of silicon waveguides.
- **LANCER project**  
*Description:* Fabrication of silicon waveguides in the infrared range.
- **High Concentration Solar Cells (HCSC) project**  
*Description:* Creation of anti-reflective layers to optimize the efficiency of solar cells.
- **CNES-RHT-2 project**  
*Description:* Microfabrication of near-infrared phototransistors for space applications.
- **Aculab – Cmut project**  
*Description:* Development of low mechanical stress silicon nitride-like PECVD materials for the realization of acoustic sensors for ultrasound.
- **Intel project**  
*Description:* Realization of MOS-FET type sensors for the detection of Hydrogen at low concentrations (Testing) for Varian Inc (Italy, United States).
- **NEMO project: (“Nano-based capsule-Endoscopy with Molecular Imaging and Optical biopsy”)**  
*Description:* Realization of Fabry-Perot interferometers for nano devices operating inside the human body.
- **Surrey project:**  
*Description:* Project in collaboration with the University of Surrey, UK, for the development of infrared waveguides.
- **ANNA project: (“Analytical Network for Nanotechnology”)**  
*Description:* Project in collaboration with several European research centers for the development of devices for nano and microelectronics.
- **eXTP project (enhanced X-ray Timing and Polarimetry) B1/B2 phase**  
*Description:* Realization of very large area silicon drift detectors for astrophysical applications
- **LOFT project (Large Observatory for X-ray Timing)**  
*Description:* Realization of very large area silicon drift detectors for astrophysical applications

- **EXTENT project (Enhanced X-ray Timing with European New Technology)**  
Description: *Realization of very large area silicon drift detectors for astrophysical applications H2020-SPACE-2018-2020: SPACE 2018-2020 / Pillar 2: Industrial Leadership / Work Programme part: 5.iii. Leadership in Enabling and Industrial Technologies – Space*
- **HERMES-SP project (High Energy Rapid Modular Ensemble of Satellites – Scientific Pathfinder)**  
Description: *Realization on constellation of nanosatellites for gamma ray burst detection*
- **THESEUS project ESA (Transient High-Energy Sky and Early Universe Surveyor)**  
Description: *Realization of satellites for gamma ray burst detection*
- **HERMES-SP project ESA-ASI (High Energy Rapid Modular Ensemble of Satellites – Scientific Pathfinder)**  
Description: *Realization on constellation of nanosatellites for gamma ray burst detection*
- **ARDESIA project (Array of Detectors for Synchrotron radiation Applications)**  
Description: *Development of a new detection system based on low-leakage monolithic arrays of Silicon Drift Detectors,*
- **BNA- private company project**  
Description: *Realization of silicon drift detectors for spectroscopic applications*
- **BNA – XW- private company project**  
Description: *Realization of free-standing membrane for silicon detectors applications*

➤ Principali progetti scientifici e industriali nazionali e internazionali nel campo delle applicazioni legate alla fusione nucleare dal 2022 a oggi:

- **FUSION – INFN- Project**  
Description: (Fusion studies of proton boron neutron less reaction in laser-generated plasma)  
Local Responsible for the TIFPA - INFN section in Trento and Work Package leader for the development of the “targetry” activity at FBK.
- **PROBONO-European Cost Action project**  
Description: *(Proton Boron Nuclear Fusion from energy production to medical applications)*  
Networking, experiments and related activities  
Work Package leader for the development of the “targetry” activity at FBK.

➤ Responsabile di progetto per esperimenti internazionali dal 2012 a oggi:

- 2019: Project leader and international experiment leader at the HiLASE Institute of the science academy of the Czech Republic, Prague titled: “Laser driven ion implantation for nano structures creation in silicon and germanium materials.”

- 2018: Project leader and international experiment leader at the HiLASE Institute of the science academy of the Czech Republic, Prague titled: “Generation of nanovoids in germanium by laser driven ion implantation.”
- 2012: Project leader and international experiment leader for the European commission proposal defined Laser Lab Europe N°PALS001770 titled: “High energy proton acceleration by thin hydrogenated-doped silicon dielectric targets using a sub-nanosecond laser” PALS laboratory, Prague, Czech Republic

» Attività editoriali per riviste scientifiche

- † **Guest Associate Editor for Interdisciplinary Physics and Topic Editor 2020** of “Advanced Targets for Laser-Based Particle Acceleration and Nuclear Reactions in Plasma” *Frontiers in Physics* – <https://www.frontiersin.org/research-topics/18392>
- † **Guest Editor for Sensors on the topic:** “Special Issue Advanced Micro and Nano Technologies for Gas Sensing” *Sensors* - <https://www.mdpi.com/>
- † **Academic Editor:** “Laser and Particle Beams” <https://www.cambridge.org/core/journals/laser-and-particle-beams>

» Attività di revisione per le seguenti riviste scientifiche:

Journal of Instrumentation, *Frontiers in Physics*, *Nuclear Instruments and Methods A and B*, *Review of Scientific Instruments*, *Applied Radiation and Isotopes*, *Laser and Particle Beams*, *Scientific Reports* and many others.

✓ Inventore o co-inventore di brevetti internazionali:

- » D.Margarone, G.Korn, **A.Picciotto**, P.Bellutti, “Nuclear fusion fixed target, device to generate nuclear fusion and method of generating nuclear fusion” CZ20130596 (A3)—2015-02-18- published and granted in Czech Republic on 01/12/2016
- » D.Margarone, G.Korn, **A.Picciotto**, P.Bellutti, “Laser Fusion System and Methods” EP2833365 (A1) published and granted
- » L.Giuffrida, D.Margarone, G.Korn, G.A.P.Cirrone, **A.Picciotto**  
“Device and method for imaging and enhanced proton-therapy treatment using nuclear reactions” submitted to EPO (2016), EP3266470A1, in collaboration with INFN LNS – ELI
- » P.Bellutti, M.Boscardin, **A.Picciotto**, D.Matsunaga, N.Zorzi, “Semiconductor detector, radiation detector and radiation detection apparatus” published and granted US10094939 (B2) 2018-10-09

➤ G.Borghi, F.Ficorella, G.Giacomini, D.Matsunaga **A.Picciotto**, N.Zorzi: “*Radiation detection element, radiation detector and radiation detection apparatus*” published and granted US10379231 (B2) 2019-08-13

➤ **A.Picciotto**, F.Ficorella, D.Matsunaga, K.Yasui, N.Zorzi: “*Radiation detector and radiation detector device*” WO2018225563 (A1) published 2019-01-09

➤ Conferenze su invito a congressi internazionali

- *EMN Light- Matter Interactions Meeting* taking place in Singapore, from May 10 to 13, 2016
- *EMN Meeting on Energy and Sustainability* 2016 during November 28 to December 2, 2016, in Osaka
- *Laser lab-Europe User Meeting*, 27-29 October 2019, Coimbra, Portugal
- *Nano Innovation Conference and School of Nanotechnology* - 18 – 23 September 2023, Rome, Italy
- *Nano Innovation Conference and School of Nanotechnology* - 9 – 13 September 2024, Rome, Italy
- *Nano Innovation Conference and School of Nanotechnology* 15– 19 September 2025, Rome, Italy
- *Conference on Research and Applications of Plasmas PLASMA-2025*, Warsaw Poland  
(<https://plasma2025.ipplm.pl/>)

➤ Comunicazioni orali a congressi internazionali

- PPLA\_2003 *Plasma Production by Laser Ablation* 18-19/09/2003
- 2nd Workshop *Production of Intense Beams of Highly charged Ions* and 2nd Workshop *Plasma Production by Laser Ablation* 08-11/06/2005
- SIF\_2005 *Congresso Nazionale - Società Italiana di Fisica* 26/09/2005 - 01/10/2005
- *Plasma Production by Laser Ablation PPLA* 2007 14-16/06/2007
- 2nd ELIMED Workshop and Panel 18-19/10/2012
- Società Italiana di Fisica\_2014 22-26/09/2014
- Mini Workshop and Meeting *Towards Proton Boron Capture Therapy* 05-06/04/2018
- TREDI\_2019\_14th Trento Workshop on Advanced Silicon Radiator Detectors 25-27/02/2019
- TARG4: *4th Targetry for High Repetition Rate Laser-Driven Sources Workshop* 09-12/06/2019
- *Laserlab-Europe User Meeting*, 27-29 October 2019, Coimbra, Portugal
- *The Third International Workshop on Proton Boron Fusion* October 2-5, 2023, Prague and Dolny Brezani, Czech Republic
- ENRIS 2023 (EURONANO LAB), Paris, 15-17 May, 2023

➤ Premi scientifici

- **2006:** Winner of one-year contract at the Italian Institute for Energy and Environment (ENEA) in Frascati, for a project connected to the realization of a “*Thomson parabola spectrometer for the determination of the ions distribution velocities*” in the framework of the inertial fusion confinement studies. He refused the position to move at Fondazione Bruno Kessler, in Trento.
- **2005:** Kiwanis Junior Club award for scientific divulgation, Messina, Italy.
- **2004:** Marie Curie Fellowship winner for 6 months (contract N°: 434/53/04) at the Institute of Physics of the Czech Republic Science Academy (ASCR) and PALS Laser Centre in Prague, Czech Republic.

➤ Memorandum d’Intesa con Istituti di Ricerca Internazionali

**2020-2023:** Dr. Picciotto was also promoter and creator of the following MoU’s between FBK and the ELI-ERIC pan European Consortium and the HILASE facility of the Czech Republic. The goal of these agreements is the progressing on science and technology activities, ideas and personal exchanging and collaboration in the European project framework,

➤ Organizzazione di conferenze e comitati scientifici

- **2024:** Workshop: “A first step on Silicon Carbide technologies for incoming projects at FBK” Local Organizer and Scientific committee member , Trento, Italy
- **2022-2024:** Workshop: “International Workshop of Proton Boron Fusion”, Catania INFN-LNS - Italy (2022), Prague ELI ERIC- Czech Republic (2023), Frascati-ENEA (2024).  
Scientific committee member
- **2018:** Workshop: “Towards Proton Boron Capture Therapy”, FBK , Povo, Trento, Italy Local Organizer and Scientific committee member , Trento, Italy

➤ Associazioni Scientifiche

**2015:** INFN and TIFPA (Trento Institute for Fundamental Physics and Applications)

**2010:** SIF (Società Italiana di Fisica)

➤ Abilitazione Scientifica Nazionale all'insegnamento Universitario 2020:

○ **June 2020:** National Scientific Qualification as **Associate Professor** (II°) for the following academic field: 02/B1, Experimental Physics of Matter; validation from 06/07/2020 to 06/07/2029

○ **July 2020:** National Scientific Qualification as **Associate Professor** (II°) for the following academic field: 02/A1, Experimental Physics of Fundamental Interactions (Nuclear and Particles Physics); validation from 10/07/2020 to 10/07/2029

➤ Attività accademiche:

- **April 2019:** Member of the faculty board of the Doctorate course (PhD) on Industrial Innovation at the University of Trento, Italy
- **June 2019:** Member of the executive board of the Doctorate course (PhD) on Industrial Innovation at the University of Trento, Italy

➤ Esperienza didattica come assistente professore presso il Dipartimento di Fisica dell'Università di Messina (2002–2006):

○ Physics – Biological Sciences master degree course;

○ Physics of Ionizing and Non Ionizing Radiation – Analysis of Natural and Anthropological Risks master degree course;

○ Informatics– Veterinary Medicine master degree course;

○ Physics– Informatics master degree course;

○ Experimental Physics Laboratory: Biological Sciences master degree course;

○ Experimental Physics Laboratory: Biology and Marine Ecology master degree course; (BEM);

➤ Esperienza didattica come docente per il Master di II livello in nanotecnologie e microtecnologie presso il Dipartimento di Fisica dell'Università di Trento e presso la Fondazione Bruno Kessler (2009):

- Theory on LPCVD and PECVD deposition of dielectric materials for microelectronic applications
- Theory on wet and dry etching materials techniques for microelectronic applications

➤ Tutor universitario e co-tutor delle seguenti tesi di dottorato:

- **2024:** “Design of a small particle accelerator on a chip” TIFPA and Trento University
- **2025:** “Characterization and banding silicon strips for high energy particle bunches deflection”  
University of Ferrara

➤ Conoscenza Lingue Straniere:

V<sup>II</sup> English: (fluently) B2

V<sup>II</sup> B1\_ PET certification received during university degree course

V<sup>II</sup> Italian: (mother tongue)

➤ Associazioni Filantropiche:

- **2025:** Membro dell’Associazione Nazionale Cavalieri D’Italia (UNCI) sezione di Roma

➤ Pubblicazioni su riviste internazionali con I.F.:

Il Dr. A. Picciotto è autore o coautore di 164 articoli pubblicati su riviste scientifiche internazionali sottoposte a revisione paritaria e atti di conferenze (fonte Scopus). Attualmente il suo h-index è 29, con 3106 citazioni (maggio 2026).

- *SMART - a Small pArticle acceLeRator on chip*  
A. Marcia, E. Corte, R. Hall-Wilton, **A. Picciotto**  
Proceedings of IPAC'26 - 17th International Particle Accelerator Conference, May 2026, Douville, France
- *Time of Flight diagnostic in laser-driven ion acceleration for ICF studies*  
N. Macaluso, M. Alonzo, M. Cipriani, F. Consoli, E. Domenicone, B. Grau, S. Mirabella, M. Nocente, G. Petringa, **A. Picciotto**, A. M. Raso, A. Scandurra, C. Verona and G. A. P. Cirrone  
Il Nuovo Cimento 49 C (2026) 101
- *Extended x-ray energy characterization of SIDDHARTA-2 large-area silicon drift detectors up to 50 keV*  
F. Clozza, F. Sgaramella, L. Abbene, F. Artibani, M. Bazzi, G. Borghi, D. Bosnar, M. Bragadireanu, A. Buttacavoli, M. Carminati, A. Clozza, R. Del Grande, L. De Paolis, K. Dulski, F. Ficorella, C. Fiorini, I. Frišćić, C. Guaraldo, M. Iliescu, M. Iwasaki, A. Khreptak, S. Manti, J. Marton, P. Moskal, F. Napolitano, S. Niedzwiecki, H. Ohnishi, **A. Picciotto**, K. Piscicchia, F. Principato, A. Scordo, M. Silarski, D. Sirghi, F. Sirghi, M. Skurzok, A. Spallone, K. Toho, O. Vazquez Doce, N. Zorzi, J. Zmeskal, and C. Curceanu  
Meas. Sci. Technol. 37 (2026) 197001

- *Designing Bent Silicon Crystals via Coactive Thin-Films for High Energy Beam Manipulation*  
M.Hamza, M.Chistè, R.Romagnoni, V.Guidi, **A.Picciotto**  
Meas. Sci. Technol. accepted (2026) in press
- *Design and optimization of an on-chip electrostatic injector for a miniaturized proton/ion linear*  
A.Marcia, R.Hall-Wilton, **A.Picciotto**  
European Physics Letters, 154 (2026) 54001
- *Multi Filter Diamond Array time-of-flight particle detector in laser-plasma Experiments* A. M. Raso, E. Domenicone, G.Petringa, F. Consoli, F. Abubaker, M. Scisciò, G.A. P. Cirrone, S. Agarwal, M. Alonzo, C. Altana, S. Arjmand, C. Ciampi, M. Cipriani, P. Devi, F. Filippi, P. Gajdos, B. Grau, G. L. Guardo, J. Krasa, M. Krupka, S. Mirabella, G. Morello, M. Nocente, F.Odorici, G.Pasquali, **A.Picciotto**, R.Rinaldi, M.Rosinski, A.Scandurra, S.Singh, P.Tchorz, G. Verona Rinati, and C. Verona  
Review of Scientific Instruments, 2026, DOI: 10.1063/5.0302424
- *CubeSats Reach the Millisecond X-Ray Domain: Crab Pulsar Timing with SPIRIT/HERMES* W. Leone, R. Mearns, T. Di Salvo, L. Burderi, M. Thomas, M. Trenti, F. Fiore, E. J. Marchesini, R. Campana, G. Baroni, M. Dafcikova, A. Anitra, Y. Evangelista, A. Sanna, S. Puccetti, R. Iaria, S. Barraclough, M. Ortiz del Castillo, R. Bertacin, P. Bellutti, G. Bertuccio, A. Chapman, G. Cabras, F. Ceraudo, T. Chen, M. Citossi, R. Crupi, G. Della Casa, E. Demenev, G. Dilillo, M. Feroci, F. Ficorella, M. Fiorini, N. Gao, A. Guzman, P. Hedderman, A. Hudrap, C. Labanti, G. La Rosa, P. Malcovati, J. McRobbie, F. Mele, G. Molera Calves, J. Morgan, G. Morgante, B. Negri, D. Novel, P. Nogara, A. Nuti, E. O'Brien, G. Pepponi, M. Perri, **A.Picciotto**, R. Piazzolla, S. Pirrotta, S. Pliego Caballero, A. Rachevski, I. Rashevskaya, A. Riggio, F. Russo, A. Santangelo, G. Sottile, C. Tenzer, Y. Tao, S. Trevisan, A. Vacchi, G. Zampa, N. Zampa, S. Xiong, S. Yi, A. Woods, S. Zhang, N. Zorzi  
The Astrophysical Journal, 1001, 5 (2026)
- [\*Status and perspectives of the FUSION INFN project for the study and optimization of the nuclear fusion reaction for Inertial Confinement applications\*](#)  
G A P Cirrone, F. Consoli, N. Macaluso, S.Mirabella, F. Abubaker, S. Agarwal, M. Alonzo, C. Altana, S. Arjmand, A. Bonasera, D. Bortot, R. Catalano, M. Cervenak, T. Chodukowski, C. Ciampi, M. Cipriani, G. Cuttone, P. Devi, E. Domenicone, R. Dudzak, D. Ettel, F. Filippi, N. Gallo, P. Gajdos, L. Giuffrida, B. Grau, L. Guardo, M. Guarrera, A. Hassan, V. Iacono, L. Juha, J. Krasa, M. Krupka, M. Krus, G. Lanzalone, L. Malferrari, D. Margarone, G. Messina, G. Morello, M. Nocente, F. Odorici, L. Palladino, A. Pappalardo, G. Pasquali, G. Petringa, **A. Picciotto**, T. Pisarczyk, A. Raso, R. Rinaldi, M. Rosinski, Z. Rusiniak, L. Salvatore, A. Scandurra, M. Scisciò, S. Singh, P. Tchorz, A. Trifiró, S. Tudisco, E. Turcu, C. Verona  
Laser and Particle Beams Open-source preview, 2025, 43, e4
- *Reliable fabrication of buried microchannels via polymer trench passivation*  
A.Sitar, A.Nawaz, A.Bagolini, L.Ferrario, **A.Picciotto**  
[Microsystem Technologies](#) 2025 DOI: 10.1007/s00542-025-05912-2

- *Functional tests of detector assembly demonstration model of the eXTP wide field monitor: system description and results*  
 Antonelli M, Zampa G., Bonvicini V., Cirrincione D., Orzan G., Rachevski A, Rashevskaya I, Zampa N., Aitink-Kroes G., de la Rie R., in 't Zand J.J.M., Laubert P., Zwart F., Tacken R., Ceraudo F., Della Casa G., Evangelista Y., Feroci M., Gálvez J.-L., Hernanz M., Baudin D., Meuris A., Bellutti P., Borghi G., Centis Vignali M., Demenev E. Ficorella F., Pepponi G., **Picciotto A.**, Samusenko A., Zorzi N  
 Journal of Instrumentation, Volume 20, Issue 41, 04/2025, C04010
- *Shallow Nitrogen Vacancy Color Centers in Diamond by Ion Implantation* G.Speranza, A.Cian, C.B.Perlingiero, E.Missale, A.Pedrielli, S.Piccolomo, E.Scattolo, D. Zanardo, R.Canteri, G.Pucker, **A.Picciotto**, R.Vollmer, R.Dell'Anna, D.Giubertoni Advanced Quantum Technologies, 2025 in press, DOI: 10.1002/qute.202500080
- *Advanced X-ray Pixel Detector (AXPiDe v2.0): New modular multichannel detector based on SDD available at the XAFS beamline of Elettra*  
 G. Agostini, D. Cirrincione, M. Antonelli, G. Aquilanti, G. Bertuccio, G. Cautero, F. Ficorella, D. Giuressi, F. Mele, R.H. Menk, L. Olivi, G. Orzan, G. Pepponi, **A. Picciotto**, A. Rachevski, I. Rashevskaya, L. Stebel, G. Zampa, N Zampa, N. Zorzi and A. Vacchi  
 Journal of Physics: Conference Series, Volume 3010, 15th International Conference on Synchrotron Radiation Instrumentation (SRI 2024), 26 August to 30 August 2024 Hamburg, Germany
- *Measurement of ion stopping power in the framework of nuclear reactions in plasmas.*  
 Trifirò, A., Altana, C., Bortot, D., Cirrone, P., Consoli, F., De Luca, S., De Angelis, R., Cavallaro, S., Ciampi, C., Lanzalone, G., Malferrari, L., Mazzucconi, D., Odorici, F., Palladino, L., Pasquali, G., **Picciotto, A.**, Raso, A. M., Testoni, R., Trimarchi, M., Tudisco, S., Valt, M., Verona, C., Zurzolo, A., Privitera, S., Scisciò, M., & Russo, A. D. (2025). HNPS Advances in Nuclear Physics, 1(S01), 1–4. <https://doi.org/10.12681/hnpsanp.7582>
- *Alpha particle production from novel targets via laser-driven proton-boron fusion*  
 Molloy D.P., Orecchia D., Tosca M., Milani A., Valt M., McNamee A., Fitzpatrick C.R.J., Kantarelou V., Kennedy J.P., Martin P., Nersisyan G., Biliak K., Protsak M., Nikitin D., Borghesi M., Choukourov A., Giuffrida L., Kar S., Maffini A., Passoni M., **Picciotto A.**, Margarone D.  
 Physical Review Research, Volume 7, Issue 1, 0/1 2025, 013230
- *Ammonia borane-based targets for new developments in laser-driven proton boron fusion*  
**A.Picciotto**, M.Valt, D.P.Molloy, A.Gaiardo, A.Milani, V. Kantarelou, L.Giuffrida, N.Gagik, A.McNamee, J.P.Kennedy, C. Fitzpatrick, M.Philip, D.Orecchia, A.Maffini, P.Scauso, L.Vanzetti, T.I.C. Turcu, L.Ferrario, R. Hall-Wilton, D.Margarone  
 Applied Surface Science 672, 01/11/2024, 160797

- [\*Spectroscopic Time-Resolving Observatory for Broadband Energy X-ray high-energy modular array\*](#)  
Hutcheson, A. L., Feroci, M. Argan, A., Antonelli, M., Barbera M., Bayer J., Bellutti, P., Bertuccio, G., Bonvicini, V., Cadoux, F., Campana, R., Vignali C.M., Ceraudo, F. Christophersen, M.,Cirrincione, D., D'Anca, F., De Angelis, N., De Rosa, A., Della Casa, G., Del Monte, E., Dilillo, G., Evangelista, Y., Favre, Y., Ficorella, F., Fiorini, M.,Ford, Jeremy J, Heddermann, P.,Grassi, M., Grove, J. E., Guzman, A., Kole, M. R., Lo Cicero, U., Lombardi, G., Malcovati, P., Michalska, M., Meuris, A., Minervini, G., Nowosielski, W., Nuti, Alessio., Pacciani, L., Pepponi, G., Persyn, S. C., **Picciotto, A.**,Pliego, S., Rachevski, A., Rashevskaya, I., Ray, Paul S., Samusenko, A., Santangelo, A., Schanne, S., Schwendeman, C. L., Sleator, C., Smith, J. R., Sveda, L., Svoboda, J., Tenzer, C., Todaro, M., Trois, A., Vacchi, Andrea, Xiong, Hao  
Journal of Astronomical Telescopes, Instruments, and Systems Volume 10, Issue 41 October 2024 Article number 042503
- *HERMES: Gamma-ray burst and gravitational wave counterpart hunter*  
Ghirlanda G., Nava L., Salafia O.,Fiore F., Campana R.,Salvaterra R., Sanna A., Leone W. Evangelista Y., Dilillo G., Puccetti S., Santangelo A., Trenti M., Guzmán A., Hedderman P.,Amelino-Camelia G., Barbera M., Baroni G., Bechini M., Bellutti P., Bertuccio G., Borghi G, Brandonisio A., Burderi L., Cabras C., Chen T., Citossi M., Colagrossi A. Crupi R.De Cecio F, Dedolli I., Del Santo M., Demenev E., Di Salvo T.  
Ficorella F., Gačnik D.Gandola M.Gao N., Gomboc A., Grassi M., Taria R., La Rosa G. Lo Cicero U., Malcovati P., Manca A., Marchesini E.J., Maselli A., Mele F., Nogara P. Pepponi G., Perri, **Picciotto A.**, Pirrotta S, Prinetto J, Quirino M., Riggio A., Řipa J.,Russo F., Selčan D., Silvestrini S.  
[\*Astronomy and Astrophysics\*](#) Volume 6891 09/2024 Article number A175
- *Multi-cycle Chamber Conditioning for Plasma Etching of SiO<sub>2</sub>: From Optimization to Stability in Lot Processing*  
A.Nawaz, A.Cian, L.Ferrario, **A.Picciotto**  
Plasma Chemistry and Plasma Processing, 2024, 090-024-10493-
- *Borane (BH), Hydrogen rich, Proton Boron fusion fuel materials for high yield laser-driven Alpha sources*, I.C.E Turcu, D. Margarone, L. Giuffrida, **A. Picciotto**, C. Spindloe, A.P.L. Robinson, and D. Batani. *Journal of Instrumentation*, 2nd International Workshop on Proton-Boron Fusion, Catania, Italy 5–8 September 2022, published 2024.
- *A Platform for Laser-Driven Ion Sources Generated with Nanosecond Laser Pulses in the Intensity Range of 10<sup>13</sup>–10<sup>15</sup> W/cm<sup>2</sup>.*  
Giuffrida L., Istokskaia V., **Picciotto A.**, Kantarelou V, Barozzi M., Dell'Anna R., Divoky M., Denk O., Giubertoni D., Grepl F., Hadjikyriacou A, Hanus M., Krasa J, Kucharik M., Levato T., ; Navratil P, Pilar J., Schillaci F., Stancek S., Tosca M., Tryus M. Velyhan A., Lucianetti A, Mocek T. Margarone D.  
Quantum Beam Science, 2024, 8, 1
- [\*A multi-MeV alpha particle source via proton-boron fusion driven by a 10-GW tabletop laser\*](#) Istokskaia, V., Tosca, M., Giuffrida, L., **Picciotto, A.**, ...[Mocek, T., Margarone, D.](#)  
[\*Communications Physics\*](#), 2023, 6(1), 27

- *Extended characterization of alpha particles via laser-induced  $p\text{-}^{11}\text{B}$  fusion reaction in silicon hydrogenated boron-doped thin targets*  
[Milluzzo, G., Belloni, F., Petringa, G., Picciotto, A., Margarone, D., Cirrone, G. \*Journal of Instrumentation\*, 2023, 18\(7\), C07022](#)
- *A new collimated multichannel modular detection system based on Silicon Drift Detectors*  
[Cirrincione, D., Antonelli, M., Aquilanti, G., Picciotto, A., Zorzi, N., Vacchi, A. \*Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment\*, 2023, 1049, 168118](#)
- *eXTP Large Area Detector: Qualification procedure of the mass production*  
[Rachevski, A., Antonelli, M., Bellutti, P., Picciotto, A., ...Zorzi, N., Vacchi, A. \*Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment\*, 2023, 1046, 167750](#)
- *Corrigendum: Plasma polymers as targets for laser-driven proton-boron fusion (Frontiers in Physics, (2023), 11, (1227140), 10.3389/fphy.2023.1227140)*  
[Tosca, M., Molloy, D., McNamee, A., Picciotto, A., ...Margarone, D., Choukourov, A. \*Frontiers in Physics\*, 2023, 11, 1319966](#)
- *Plasma polymers as targets for laser-driven proton-boron fusion*  
[Tosca, M., Molloy, D., McNamee, A., Picciotto, A., ...Margarone, D., Choukourov, A. \*Frontiers in Physics\*, 2023, 11, 1227140](#)
- *A Methodology for the Discrimination of Alpha Particles from Other Ions in Laser-Driven Proton-Boron Reactions Using CR-39 Detectors Coupled in a Thomson Parabola Spectrometer*  
[Kantarelou, V., Velyhan, A., Tchórz, P., ...Margarone, D., Giuffrida, L. \*Laser and Particle Beams\*, 2023, 2023, 3125787](#)
- *Timing Performances of SDD as Photodetector Candidate for Proton Therapy Application*  
[Di Giacomo, S., Utica, G., Carminati, M., ...Picciotto, A., Fiorini, C. \*IEEE Transactions on Radiation and Plasma Medical Sciences\*, 2022, 6\(7\), pp. 811–819](#)
- *Radiation-induced effects on the RIGEL ASIC*  
[Ceraudo, F., Dedolli, I., Cirrincione, D., Picciotto, A., ...Zampa, N., Zorzi, N. \*Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment\*, 2022, 1037, 166903](#)
- *In-Target Proton–Boron Nuclear Fusion Using a PW-Class Laser*  
[Margarone, D., Bonvalet, J., Giuffrida, L., Picciotto, A., ...Habara, H., Batani, D. \*Applied Sciences \(Switzerland\)\*, 2022, 12\(3\), 1444](#)
- *Study of radiation-induced effects on the RIGEL ASIC*  
[Ceraudo, F., Dedolli, I., Ambrosino, F., Picciotto, A., ...Zampa, N., Zorzi, N. \*Proceedings of SPIE - The International Society for Optical Engineering\*, 2022, 12191, 121912L](#)

- [\*PixDD: a multi-pixel Silicon Drift Detector for high-throughput spectral-timing studies\*](#) Ceraudo, F., Ambrosino, F., Bellutti, P., **Picciotto, A.**, ...Zampa, N., Zorzi, N. [Proceedings of SPIE - The International Society for Optical Engineering](#), 2022, 1219116
- [\*Recent progress in high resolution X-ray customised detection systems\*](#) Vacchi, A., Cirrincione, D., Altissimo, M., **Picciotto, A.**, ...Zampa, N., Zorzi, N. [Journal of Physics: Conference Series](#), 2022, 2380(1), 012095
- [\*Design, integration, and test of the scientific payloads on-board the HERMES constellation and the SpIRIT mission\*](#) Evangelista, Y., Fiore, F., Campana, R., **Picciotto, A.**, ...Zampa, N., Zorzi, N. [Proceedings of SPIE - The International Society for Optical Engineering](#), 2022, 121811G
- [\*The Large Area Detector onboard the eXTP mission\*](#) Feroci, M., Ambrosi, G., Ambrosino, F., **Picciotto, A.**, ...Zhou, Y., Zorzi, N. [Proceedings of SPIE - The International Society for Optical Engineering](#), 2022, 121811X
- [\*The enhanced X-ray Timing and Polarimetry mission – eXTP: an update on its scientific cases, mission profile and development status\*](#) Zhang, S.-N., Santangelo, A., Xu, Y., **Picciotto, A.**, ...Zorzi, N., Zwart, F. [Proceedings of SPIE - The International Society for Optical Engineering](#), 2022, 12181, 121811W
- [\*ORION, multichip readout electronics for satellite wide energy range X-/γ-ray imaging spectroscopy: Design and characterization of the analog section\*](#) Mele, F., Dedolli, I., Gandola, M., **Picciotto, A.**, ...Zampa, N., Zorzi, N. [IEEE Transactions on Nuclear Science](#), 2021, 68(12), pp. 2801–2809
- [\*Trace-element XAFS sensitivity: A stress test for a new XRF multi-detector\*](#) Carlomagno, I., Antonelli, M., Aquilanti, G., . **Picciotto, A.**, ..Zorzi, N., Meneghini, C. [Journal of Synchrotron Radiation](#), 2021, 28, pp. 1811–1819
- [\*ARDESIA-16: A 16-channel SDD-based spectrometer for energy dispersive X-ray fluorescence spectroscopy\*](#) Utica, G., Fabbrica, E., Carminati, M., **Picciotto, A.**, ...Falkenberg, G., Fiorini, C. [Journal of Instrumentation](#), 2021, 16(7), P07057
- [\*Carbon nanotubes embedded in a polyimide foil for proton acceleration with a sub-ns laser\*](#) **Picciotto, A.**, Margarone, D., ...Tomarchio, E., Ganci, F. [Journal of Instrumentation](#), 2021, 16(7), P07008
- [\*Energetic α -particle sources produced through proton-boron reactions by high-energy high-intensity laser beams\*](#) Bonvalet, J., Nicolai, Ph., Raffestin, D., **Picciotto, A.**, ...Habara, H., Margarone, D. [Physical Review E](#), 2021, 103(5), 053202
- [\*MEMS membranes with nanoscale holes for analytical applications\*](#) Bagolini, A., Correale, R., **Picciotto, A.**, Di Lorenzo, M., Scapinello, M. [Membranes](#), 2021, 11(2), pp. 1–13, 74

- [Optimization of a low power chemoresistive gas sensor: Predictive thermal modelling and mechanical failure analysis](#)  
Gaiardo, A., Novel, D., Scattolo, E., **Picciotto, A.**, ..Lugli, P., Bagolini, A.  
[Sensors \(Switzerland\)](#), 2021, 21(3), pp. 1–19, 783
- [Assessment of Silicon Drift Detector Timing Performance for Proton Therapy Application](#)  
Di Giacomo, S., Utica, G., Carminati, M., ..**Picciotto, A.**, Fiorini, C.  
IEEE Nuclear Science Symposium and Medical Imaging Conference Record, NSS/MIC 2021 and 28th International Symposium on Room-Temperature Semiconductor Detectors, RTSD 2022, 2021
- [Generation of  \$\alpha\$ -Particle Beams With a Multi-kJ, Peta-Watt Class Laser System](#)  
Margarone, D., Morace, A., Bonvalet, J., **Picciotto, A.**, ..Korn, G., Batani, D.  
[Frontiers in Physics](#), 2020, 8, 343
- [X-/ \$\gamma\$ -Ray Detection Instrument for the HERMES Nano-Satellites Based on SDDs Read-Out by the LYRA Mixed-Signal ASIC Chipset](#)  
Grassi, M., Gandola, M., Mele, F., **Picciotto, A.**, ...Fiore, F., Burderi, L.  
I2MTC 2020 - International Instrumentation and Measurement Technology Conference, Proceedings, 2020, 9129520
- [Strengthening of wood-like materials via densification and nanoparticle intercalation](#)  
Novel, D., Ghio, S., Gaiardo, A., **Picciotto, A.**, ...Bellutti, P., Pugno, N.M.  
[Nanomaterials](#), 2020, 10(3), 478
- [Pixel Drift Detector \(PixDD\) – SIRIO: an X-ray spectroscopic system with high energy resolution at room temperature](#)  
Sammartini, M., Gandola, M., Mele, F., **Picciotto, A.**, ...Zorzi, N., Vacchi, A.  
[Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment](#), 2020, 953, 163114
- [High-current stream of energetic  \$\alpha\$  particles from laser-driven proton-boron fusion](#)  
Giuffrida, L., Belloni, F., Margarone, D., **Picciotto, A.**, ..Korn, G., Cirrone, G.A.P.  
[Physical Review E](#), 2020, 101(1), 013204
- [The XGIS instrument on-board THESEUS: The detection plane and on-board electronics](#)  
Fuschino, F., Campana, R., Labanti, C., **Picciotto, A.**, ...Zampa, N., Zorzi, N.  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2020, 11444, 114448
- [An innovative architecture for a wide band transient monitor on board the HERMES nano-satellite constellation](#)  
Fuschino, F., Campana, R., Labanti, C., **Picciotto, A.**, ...Lu, F., Xu, Y.  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2020, 11444, 114441S
- [The scientific payload on board the HERMES-TP and HERMES-SP CubeSat missions](#)  
Evangelista, Y., Fiore, F., Fuschino, F., **Picciotto, A.**, ...Werner, N., Zanotti, G.  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2020, 11444, 114441T

- [\*The X/Gamma-ray Imaging Spectrometer \(XGIS\) on-board THESEUS: Design, main characteristics, and concept of operation\*](#)  
[Labanti, C., Amati, L., Frontera, F., Picciotto, A., ...Trois, A., Piazzolla, R. Proceedings of SPIE - The International Society for Optical Engineering, 2020, 11444, 114442K](#)
- [\*Towards Efficiency and Count-Rate Enhancement of X-ray ARDESIA Spectrometer\*](#)  
[Utica, G., Gugiatti, M., Carminati, M., Picciotto, A., ...Welter, E., Fiorini, C. 2019 IEEE Nuclear Science Symposium and Medical Imaging Conference, NSS/MIC](#)
- [\*ARDESIA: A fast silicon drift detector X-ray spectrometer for synchrotron applications\*](#)  
[Hafizh, I., Bellotti, G., Carminati, M., Picciotto, A., ...Bombelli, L., Fiorini, C. X-Ray Spectrometry, 2019, 48\(5\), pp. 382–386](#)
- [\*XRF topography information: Simulations and data from a novel silicon drift detector system\*](#)  
[Kourousias, G., Billè, F., Cautero, G., Picciotto, A., ...Vacchi, A., Gianoncelli, A. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, pp. 80–81](#)
- [\*HERMES: An ultra-wide band X and gamma-ray transient monitor on board a nano-satellite constellation\*](#)  
[Fuschino, F., Campana, R., Labanti, C., Picciotto, A., ...Zampa, N., Zorzi, N. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, pp. 199–203](#)
- [\*High precision mapping of single-pixel Silicon Drift Detector for applications in astrophysics and advanced light source\*](#)  
[Cirincione, D., Ahangarianabhari, M., Ambrosino, F., Picciotto, A., ...Zorzi, N., Vacchi, A. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, pp. 239–241](#)
- [\*The XAFS fluorescence detector system based on 64 silicon drift detectors for the SESAME synchrotron light source\*](#)  
[Rachevski, A., Ahangarianabhari, M., Aquilanti, G., . Picciotto, A., ..Zorzi, N., Vacchi, A. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, pp. 719–721](#)
- [\*Development of MEMS MOS gas sensors with CMOS compatible PECVD inter-metal passivation\*](#)  
[Bagolini, A., Gaiardo, A., Crivellari, M., Picciotto, A., ...Guidi, V., Bellutti, P. Sensors and Actuators, B: Chemical, 2019, 292, pp. 225–232](#)
- [\*Investigation of charges-driven interaction between graphene and different SiO<sub>2</sub> surfaces\*](#)  
[Pantano, M.F., Iacob, E., Picciotto, A., ...Pugno, N.M., Speranza, G. Carbon, 2019, 148, pp. 336–343](#)
- [\*Characterization of Ardesia: A 4-channel sdd x-ray spectrometer for synchrotron measurements at high count rates\*](#)  
[Hafizh, I., Bellotti, G., Carminati, M., Picciotto, A., ...Bombelli, L., Fiorini, C. Journal of Instrumentation, 2019, 14\(6\), P06027](#)

- [\*The enhanced X-ray Timing and Polarimetry mission—eXTP\*](#)  
[Zhang, S.N., Santangelo, A., Feroci, M., Picciotto, A., ...Zorzi, N., Zwart, J.F.](#)  
[Science China: Physics, Mechanics and Astronomy](#), 2019, 62(2), 29502
- [\*Large solid angle and high detection efficiency multi-element silicon drift detectors \(SDD\) for synchrotron based x-ray spectroscopy\*](#)  
[Bufon, J., Altissimo, M., Aquilanti, G., Picciotto, A., ...Zorzi, N., Vacchi, A.](#)  
[AIP Conference Proceedings](#), 2019, 2054, 060061
- [\*First experimental proof of Proton Boron Capture Therapy \(PBCT\) to enhance protontherapy effectiveness\*](#)  
[Cirrone, G.A.P., Manti, L., Margarone, D., Picciotto, A., ...Cuttone, G., Korn, G.](#)  
[Scientific Reports](#), 2018, 8(1), 1141
- [\*Qualification of ARDESIA SDD X-ray Spectrometer in Synchrotron Measurements\*](#)  
[Hafizh, I., Utica, G., Gugiatti, M., Picciotto, A., ...Bombelli, L., Fiorini, C.](#)  
2018 IEEE Nuclear Science Symposium and Medical Imaging Conference, NSS/MIC 2018 - Proceedings, 2018, 8824414
- [\*Characterization of a novel pixelated Silicon Drift Detector \(PixDD\) for high-throughput X-ray astrophysics\*](#)  
[Evangelista, Y., Ambrosino, F., Feroci, M., Picciotto, A., ...Zorzi, N., Vacchi, A.](#)  
[Journal of Instrumentation](#), 2018, 13(9), P09011
- [\*A new large solid angle multi-element silicon drift detector system for low energy X-ray fluorescence spectroscopy\*](#)  
[Bufon, J., Schillani, S., Altissimo, M., Picciotto, A., ...Zorzi, N., Vacchi, A.](#)  
[Journal of Instrumentation](#), 2018, 13(3), C03032
- [\*On the enhancement of  \$p^{11}B\$  fusion reaction rate in laser-driven plasma by  \$\alpha \rightarrow p\$  collisional energy transfer\*](#)  
[Belloni, F., Margarone, D., Picciotto, A., Schillaci, F., Giuffrida, L.](#)  
[Physics of Plasmas](#), 2018, 25(2), 020701
- [\*Multi probes measurements at the PALS Facility Research Centre during high intense laser pulse interactions with various target materials\*](#)  
[De Marco, M., Krása, J., Cikhardt, J. Picciotto, A., , ...Limpouch, J., Korn, G.](#)  
[EPJ Web of Conferences](#), 2018, 167, 03009
- [\*The X-Gamma Imaging Spectrometer \(XGIS\) onboard THESEUS\*](#)  
[Campana, R., Fuschino, F., Labanti, C., Picciotto, A., ...Zampa, N., Zorzi, N.](#)  
Memorie della Societa Astronomica Italiana - Journal of the Italian Astronomical Society, 2018, 89(2), pp. 137–147
- [\*The wide field monitor onboard the eXTP mission\*](#)  
[Hernanz, M., Brandt, S., Feroci, M., Picciotto, A., ...Limousin, O., Meris, A.](#)  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2018, 10699, 1069948

- [\*The Large Area Detector onboard the eXTP mission\*](#)  
Feroci, M., Ahangarianabhari, M., Ambrosi, G., **Picciotto, A.**, ...Zhou, Y., Zorzi, N.  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2018, 10699, 106991C
- [\*Fabrication of advanced targets for laser driven nuclear fusion reactions through standard microelectronics technology approaches\*](#)  
Picciotto, A., Crivellari, M., Bellutti, P., **Picciotto, A.**, ...Ullschmied, J., Margarone, D.  
[Journal of Instrumentation](#), 2017, 12(10), P10001
- [\*Towards a multi-element silicon drift detector system for fluorescence spectroscopy in the soft X-ray regime\*](#)  
Bufon, J., Gianoncelli, A., Ahangarianabhari, M., **Picciotto, A.**, ...Zampa, N., Zorzi, N.  
[X-Ray Spectrometry](#), 2017, 46(5), pp. 313–318
- [\*Manipulation of laser-accelerated proton beam profiles by nanostructured and microstructured targets\*](#)  
Giuffrida, L., Svensson, K., Psikal, J. **Picciotto, A.**, ...Wahlström, C.-G., Margarone, D.  
[Physical Review Accelerators and Beams](#), 2017, 20(8), 081301
- [\*Prompt gamma-ray emission for future imaging applications in proton-boron fusion therapy\*](#) Petringa, G., Cirrone, G.A.P., Caliri, C., **Picciotto, A.**, ...Santonocito, D., Scuderi, V.  
[Journal of Instrumentation](#), 2017, 12(3), C03059
- [\*Study of gamma-ray emission by proton beam interaction with injected Boron atoms for future medical imaging applications\*](#)  
Petringa, G., Cirrone, G.A.P., Caliri, C., **Picciotto, A.**, ...Santonocito, D., Scuderi, V.  
[Journal of Instrumentation](#), 2017, 12(3), C03049
- [\*Nano and micro structured targets to modulate the spatial profile of laser driven proton beams\*](#)  
Giuffrida, L., Svensson, K., Psikal, J., **Picciotto, A.**, ...Wahlström, C.-G., Korn, G.  
[Journal of Instrumentation](#), 2017, 12(3), C03040
- [\*New silicon drift detectors and CMOS readout electronics for X-ray spectroscopy from room temperature to cryogenic operations\*](#)  
Quaglia, R., Bellotti, G., Butt, A.D., **Picciotto, A.**, ...Piemonte, C., Zorzi, N.  
2015 IEEE Nuclear Science Symposium and Medical Imaging Conference, NSS/MIC 2015, 2016, 7581853
- [\*Prompt gamma ray diagnostics and enhanced hadron-therapy using neutron-free nuclear reactions\*](#)  
Giuffrida, L., Margarone, D., Cirrone, G.A.P., **Picciotto, A.**, ...Cuttone, G., Korn, G.  
[AIP Advances](#), 2016, 6(10), 105204
- [\*First results of a novel Silicon Drift Detector array designed for low energy X-ray fluorescence spectroscopy\*](#)  
Rachevski, A., Ahangarianabhari, M., Bellutti, P., **Picciotto, A.**, ...Zampa, N., Zorzi, N.  
[Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment](#), 2016, 824, pp. 452–454

- [\*A new detector system for low energy X-ray fluorescence coupled with soft X-ray microscopy: First tests and characterization\*](#)  
Gianoncelli, A., Bufon, J., Ahangarianabhari, M., **Picciotto, A.**, ...Zampa, N., Zorzi, N. [Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment](#), 2016, 816, pp. 113–118
- [\*Development and tests of a new prototype detector for the XAFS beamline at Elettra Synchrotron in Trieste\*](#)  
Fabiani, S., Ahangarianabhari, M., Baldazzi, G., **Picciotto, A.**, ...Zampa, N., Zorzi, N. [Journal of Physics: Conference Series](#), 2016, 689(1), 012017
- [\*X-Ray Silicon Drift Detector-CMOS Front-End System with High Energy Resolution at Room Temperature\*](#)  
Bertuccio, G., Ahangarianabhari, M., Graziani, C., **Picciotto, A.**, Piemonte, C., Zorzi, N. [IEEE Transactions on Nuclear Science](#), 2016, 63(1), pp. 400–406, 7407501
- [\*Avalanche boron fusion by laser picosecond block ignition with magnetic trapping for clean and economic reactor\*](#)  
Hora, H., Korn, G., Eliezer, S., **Picciotto, A.**, ...Barty, C.P.J., Kirchoff, G.J. [High Power Laser Science and Engineering](#), 2016, 4, e35
- [\*A programmable System-on-Chip based digital pulse processing for high resolution X-ray spectroscopy\*](#)  
Cicuttin, A., Crespo, M.L., Mannatunga, K.S., **Picciotto, A.**, ...Piemonte, C., Zorzi, N. 2016 International Conference on Advances in Electrical, Electronic and Systems Engineering, ICAEES 2016, 2016, pp. 520–525, 7888100
- [\*A compact and modular X and gamma-ray detector with a CsI scintillator and double-readout Silicon Drift Detectors\*](#)  
Campana, R., Fuschino, F., Labanti, C., ...Zampa, N., Zorzi, N. [Proceedings of SPIE - The International Society for Optical Engineering](#), 2016, 9905, 990561
- [\*The LOFT mission concept - A status update\*](#)  
Feroci, M., Bozzo, E., Brandt, S., **Picciotto, A.**, ...Zorzi, N., Zwart, F. [Proceedings of SPIE - The International Society for Optical Engineering](#), 2016, 9905, 99051R
- [\*EXTP: Enhanced X-ray Timing and Polarization mission\*](#)  
Zhang, S.N., Feroci, M., Santangelo, A., **Picciotto, A.**, ...Zhou, P., Zhou, X.L. [Proceedings of SPIE - The International Society for Optical Engineering](#), 2016, 9905, 99051Q
- [\*PECVD silicon-rich nitride and low stress nitride films mechanical characterization using membrane point load deflection\*](#)  
Bagolini, A., **Picciotto, A.**, Crivellari, M., Conci, P., Bellutti, P. [Journal of Micromechanics and Microengineering](#), 2015, 26(2), 025004
- [\*Surface wet-ability modification of thin PECVD silicon nitride layers by 40keV argon ion treatments\*](#)  
Caridi, F., **Picciotto, A.**, Vanzetti, L., Iacob, E., Scolaro, C. [Radiation Physics and Chemistry](#), 2015, 115, pp. 49–54

- [\*Erratum: Fusion energy using avalanche increased boron reactions for block-ignition by ultrahigh power picosecond laser pulses\*](#)  
Hora, H., Korn, G., Giuffrida, L., **Picciotto, A.**, ...Moustaizis, S., Mourou, G.  
[Laser and Particle Beams](#), 2015, 33(4), pp. 773
- [\*Fusion energy using avalanche increased boron reactions for block-ignition by ultrahigh power picosecond laser pulses\*](#)  
Hora, H., Korn, G., Giuffrida, L., **Picciotto, A.**,...Moustaizis, S., Mourou, G.  
[Laser and Particle Beams](#), 2015, 33(4), pp. 607–619
- [\*NUV silicon photomultipliers with high detection efficiency and reduced delayed correlated noise\*](#)  
Acerbi, F., Ferri, A., Zappala, G., **Picciotto, A.**, ...Zorzi, N., Piemonte, C.  
[IEEE Transactions on Nuclear Science](#), 2015, 62(3), pp. 1318–1325, 7102791
- [\*Monolithic arrays of SDDs and low noise CMOS readout for X-ray spectroscopy measurements in nuclear physics experiments\*](#)  
Quaglia, R., Fiorini, C., Bombelli, L., ...**Picciotto, A.**, Piemonte, C.  
[Journal of Instrumentation](#), 2015, 10(3), C03001
- [\*Silicon Drift Detectors and CUBE preamplifiers for high-resolution X-ray spectroscopy\*](#)  
Quaglia, R., Bombelli, L., Busca, P., ...**Picciotto, A.**, Piemonte, C.  
[IEEE Transactions on Nuclear Science](#), 2015, 62(1), pp. 221–227, 7027255
- [\*Advanced scheme for high-yield laser driven proton-boron fusion reaction\*](#)  
Margarone, D., **Picciotto, A.**, Velyhan, A., ...Bellutti, P., Korn, G.  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2015, 9345, 93450
- [\*A silicon drift detector-CMOS front-end system for high resolution X-ray spectroscopy up to room temperature\*](#)  
Bertuccio, G., Ahangarianabhari, M., Graziani, C., ...**Picciotto, A.**, Piemonte, C.  
[Journal of Instrumentation](#), 2015, 10(1), P01002
- [\*PECVD low stress silicon nitride analysis and optimization for the fabrication of CMUT devices\*](#)  
Bagolini, A., Savoia, A.S., **Picciotto, A.**, ...Lamberti, N., Caliano, G.  
[Journal of Micromechanics and Microengineering](#), 2015, 25(1), 015012
- [\*Advanced scheme for high-yield laser driven nuclear reactions\*](#)  
Margarone, D., **Picciotto, A.**, Velyhan, A., ...Bellutti, P., Korn, G.  
[Plasma Physics and Controlled Fusion](#), 2015, 57(1), 014030
- [\*A novel multi-cell silicon drift detector for Low Energy X-Ray Fluorescence \(LEXRF\) spectroscopy\*](#)  
Bufon, J., Ahangarianabhari, M., Bellutti, P., **Picciotto, A.** ..Zampa, G., Zampa, N.  
[Journal of Instrumentation](#), 2014, 9(12), C12017

- [Characterization of the VEGA ASIC coupled to large area position-sensitive Silicon Drift Detectors](#)  
Campana, R., Evangelista, Y., Fuschino, F., ...**Picciotto, A.**, Zuffa, M.  
[Journal of Instrumentation](#), 2014, 9(8), P08008
- [Large-area linear Silicon Drift Detector design for X-ray experiments](#)  
Rachevski, A., Zampa, G., Zampa, N., **Picciotto, A.** ...[Piemonte, C.](#), Vacchi, A.  
[Journal of Instrumentation](#), 2014, 9(7), P07014
- [Boron-proton nuclear-fusion enhancement induced in boron-doped silicon targets by low-contrast pulsed laser](#)  
**Picciotto, A.**, Margarone, D., Velyhan, A., ...[Kucharik, M.](#), Korn, G.  
[Physical Review X](#), 2014, 4(3), 031030
- [Generation of secondary particles from sub-nanosecond laser irradiation of targets at intensities of  \$10^{16} \text{ W cm}^{-2}\$](#)   
[Krása, J.](#), Margarone, D., [Klír, D.](#), **Picciotto, A.**, ...[Parys, P.](#), [Ryc, L.](#)  
[IEEE Transactions on Plasma Science](#), 2013, 41(10), pp. 2819–2824, 6504780
- [Advanced target fabrication](#)  
**Picciotto, A.**, Mangione, A., Perin, J.P., Prokupek, J., Margarone, D.  
[AIP Conference Proceedings](#), 2013, 1546, pp. 26–33
- [Silicon drift detectors for readout of scintillators in gamma-ray spectroscopy](#)  
[Fiorini, C.](#), [Bombelli, L.](#), [Busca, P.](#), **Picciotto, A.**, ...[Nelms, N.](#), [Shortt, B.](#) [IEEE Transactions on Nuclear Science](#), 2013, 60(4), pp. 2923–2933, 6575206
- [Microfabrication of MOS H<sub>2</sub> sensors based on Pd-gate deposited by pulsed laser ablation](#)  
[Crivellari, M.](#), [Mattevi, M.](#), **Picciotto, A.**, ...[Gennaro, S.](#), [Gasparotto, A.](#)  
[Sensors and Actuators, B: Chemical](#), 2013, 186, pp. 180–185
- [Proton driven acceleration by intense laser pulses irradiating thin hydrogenated targets](#)  
[Torrise, L.](#), [Cutroneo, M.](#), [Cavallaro, S.](#), **Picciotto, A.**, ...[Ryc, L.](#), [Szydlowski, A.](#)  
[Applied Surface Science](#), 2013, 272, pp. 2–5
- [Proton emission from resonant laser absorption and self-focusing effects from hydrogenated structures](#)  
[Cutroneo, M.](#), [Torrise, L.](#), [Margarone, D.](#), **Picciotto, A.**  
[Applied Surface Science](#), 2013, 272, pp. 50–54
- [Influence of the ablation threshold fluence on laser-driven acceleration](#)  
[Margarone, D.](#), [Velyhan, A.](#), [Torrise, L.](#), **Picciotto, A.**, ...[Proska, J.](#), [Novotny, F.](#) [Applied Surface Science](#), 2013, 272, pp. 132–137
- [New developments of SDD-based X-ray detectors for the Siddharta-2 experiment](#)  
[Quaglia, R.](#), [Bombelli, L.](#), [Fiorini, C.](#), ...[Picciotto, A.](#), [Piemonte, C.](#)  
[IEEE Nuclear Science Symposium Conference Record](#), 2013, 6829023

- [Characterization of the VEGA ASIC dedicated to large area position-sensitive SDDs for space and medical applications](#)  
Fuschino, F., Campana, R., Evangelista, Y., ...**Picciotto, A.**, Boscardin, M.  
IEEE Nuclear Science Symposium Conference Record, 2013, 6829435
- [X-ray spectroscopic performance of a matrix of silicon drift diodes](#)  
Rachevski, A., Zampa, G., Zampa, N., **Picciotto, A.**, ...Crespo, M.L., Tuniz, C.  
[Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment](#), 2013, 718, pp. 353–355
- [Functional test of a Radon sensor based on a high-resistivity-silicon BJT detector](#)  
Dalla Betta, G.F., Tyzhnevyy, V., Bosi, A., **Picciotto, A.**, ...Penzo, S., Cardellini, F.  
[Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment](#), 2013, 718, pp. 302–304
- [Development of a detector based on Silicon Drift Detectors for gamma-ray spectroscopy for astronomy applications](#)  
Peloso, R., Fiorini, C., Bombelli, L., **Picciotto, A.**, ...Nelms, N., Shortt, B.  
IEEE Nuclear Science Symposium Conference Record, 2012, pp. 918–921, 6551240
- [New development of Silicon Drift Detectors for gamma-ray spectroscopy](#)  
Fiorini, C., Bombelli, L., Busca, P., **Picciotto, A.**, ...Piemonte, C., Zorzi, N.  
IEEE Nuclear Science Symposium Conference Record, 2012, pp. 2068–2074, 6551477
- [Development of an automatic procedure for the characterization of silicon photomultipliers](#)  
Piemonte, C., Ferri, A., Gola, A., **Picciotto, A.**, ...Tarolli, A., Zorzi, N.  
IEEE Nuclear Science Symposium Conference Record, 2012, pp. 428–432, 6551141
- [New methods for high current fast ion beam production by laser-driven acceleration](#)  
Margarone, D., Krasa, J., Prokupek, J., **Picciotto, A.**, ...Korn, G., Rus, B.  
[Review of Scientific Instruments](#), 2012, 83(2), 02B307
- [Proton emission from thin hydrogenated targets irradiated by laser pulses at  \$10^{16}\$  W/cm<sup>2</sup>](#)  
Torrisi, L., Giuffrida, L., Cutroneo, M., **Picciotto, A.**, ...Badziak, J., Rosinski, M.  
[Review of Scientific Instruments](#), 2012, 83(2), 02B315
- [Microfabrication of silicon hydrogenated thin targets for multi-MeV laser-driven proton acceleration](#)  
**Picciotto, A.**, Margarone, D., Crivellari, M., ...Velhyan, A., Ullschmied, J.  
[Applied Physics Express](#), 2011, 4(12), 126401
- [High current, high energy proton beams accelerated by a sub-nanosecond laser](#)  
Margarone, D., Krasa, J., **Picciotto, A.**, ...Ullschmied, J., Rus, B.  
[Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment](#), 2011, 653(1), pp. 159–163
- [Real-time diagnostics of fast light ion beams accelerated by a sub-nanosecond laser](#)  
Margarone, D., Krása, J., **Picciotto, A.**, Prokupek, J.  
[Nukleonika](#), 2011, 56(2), pp. 137–141

- [Full characterization of laser-accelerated ion beams using Faraday cup, silicon carbide, and single-crystal diamond detectors](#)  
Margarone, D., Krsa, J., Giuffrida, L., **Picciotto, A.**, ...Ullschmied, J., Rus, B.  
[Journal of Applied Physics](#), 2011, 109(10), 103302
- [Timing performance of large area SiPMs coupled to LYSO using dark noise compensation methods](#)  
Piemonte, C., Gola, A., **Picciotto, A.**, ...Tarolli, A., Zorzi, N.  
IEEE Nuclear Science Symposium Conference Record, 2011, pp. 59–63, 6154401
- [BJT detector for  \$\alpha\$ -particle and Radon detection and monitoring](#)  
Tyzhnevyyi, V., Dalla Betta, G.-F., Verzellesi, G., ...Giacomini, G., **Picciotto, A.**  
IEEE Nuclear Science Symposium Conference Record, 2011, pp. 1941–1945, 6154390
- [Protons' generation by laser irradiation at  \$5 \times 10^9\$  W/cm<sup>2</sup> from silicon dielectric targets containing an excess of hydrogen](#)  
Caridi, F., **Picciotto, A.**, Torrisi, L., Giuffrida, L., Bellutti, P.  
[Applied Surface Science](#), 2011, 257(7), pp. 2870–2874
- [Laser-driven acceleration of protons from hydrogenated annealed silicon targets](#)  
**Picciotto, A.**, Margarone, D., Krasa, J., ...Rus, B., Dapor, M.  
[EPL](#), 2010, 92(3), 34008
- [Silicon solar cells with nano-crystalline silicon down shifter: Experiment and modeling](#) Jestin, Y., Pucker, G., Ghulinyan, M., **Picciotto, A.**, ...Yuan, Z., Pavesi, L.  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2010, 7772, 77720B
- [Particle size determination of silver nanoparticles generated by plasma laser ablation using a deconvolution method](#)  
**Picciotto, A.**, Torrisi, L., Margarone, D., Bellutti, P.  
[Radiation Effects and Defects in Solids](#), 2010, 165(6-10), pp. 706–712
- [Comparison of Surface Modifications Induced by Ion Implantation in UHMWPE](#) Visco, A.M., Torrisi, L., Campo, N., **Picciotto, A.**  
[International Journal of Polymer Analysis and Characterization](#), 2010, 15(2), pp. 73–86
- [Surface plasmon resonance analysis of Ag nanoparticles generated by pulsed laser ablation](#)  
**Picciotto, A.**, Pucker, G., Lui, A., ...Margarone, D., Bellutti, P.  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2009, 7366, 73661V
- [Influence of interfaces density and thermal processes on mechanical stress of PECVD silicon nitride](#)  
**Picciotto, A.**, Bagolini, A., Bellutti, P., Boscardin, M.  
[Applied Surface Science](#), 2009, 256(1), pp. 251–255
- [Preparation and characterization of nanocrystals using ellipsometry and X-ray diffraction](#)  
Petrik, P., Milita, S., Pucker, G., ...Vanzetti, L., **Picciotto, A.**  
[ECS Transactions](#), 2009, 25(3), pp. 373–378

- [Study of crystallization and phase mixing in SiO<sub>2</sub>/SiO<sub>x</sub> superlattices through form birefringence measurements](#)  
Ghulinyan, M., Wang, M., **Picciotto, A.**, Pucker, G.  
[Proceedings of SPIE - The International Society for Optical Engineering](#), 2008, 6996, 69960G
- [Evidence of plasmon resonances of nickel particles deposited by pulsed laser ablation](#)  
**Picciotto, A.**, Pucker, G., Torrisci, L., ..Caridi, F., Bagolini, A.  
[Radiation Effects and Defects in Solids](#), 2008, 163(4-6), pp. 513–518
- [Characterization of laser ablation of polymethylmethacrylate at different laser wavelengths](#)  
Torrisci, L., Lorusso, A., Nassisi, V., **Picciotto, A.**  
[Radiation Effects and Defects in Solids](#), 2008, 163(3), pp. 179–187
- [Time-of-flight spectroscopy of ion currents emitted by laser produced plasmas](#)  
Krása, J., **Picciotto, A.**, Gammino, S., ..Rohlina, K., Torrisci, L.  
33rd EPS Conference on Plasma Physics 2006, EPS 2006, 2006, 1, pp. 272–275
- [Particle emission from tantalum plasma produced by 532 nm laser pulse ablation](#)  
Torrisci, L., Caridi, F., **Picciotto, A.**, Margarone, D., Borrielli, A.  
[Journal of Applied Physics](#), 2006, 100(9), 093306
- [Energy distribution of particles ejected by laser-generated aluminium plasma](#)  
Torrisci, L., Caridi, F., **Picciotto, A.**, Borrielli, A.  
[Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms](#), 2006, 252(2), pp. 183–189
- [Energy distributions of particles ejected from laser-generated pulsed plasmas](#)  
Caridi, F., Torrisci, L., Margarone, D., **Picciotto, A.**, ..Mezzasalma, A.M., Gammino, S.  
[Czechoslovak Journal of Physics](#), 2006, 56(SUPPL. 2)
- [Physical characterization of pulsed laser deposition of diamond-like nanostructures](#)  
Mangione, A., Torrisci, L., **Picciotto, A.**, Caridi, F.  
[Czechoslovak Journal of Physics](#), 2006, 56(SUPPL. 2)
- [Carbon-plasma produced in vacuum by 532 nm-3 ns laser pulses ablation](#)  
Torrisci, L., Caridi, F., Margarone, D., **A.Picciotto**,..Mangione, A., Beltrano, J.J.  
[Applied Surface Science](#), 2006, 252(18), pp. 6383–6389
- [Plasma temperature and ion current analysis of gold ablation at different laser power rates](#)  
**Picciotto, A.**, Krása, J., Lásková, L., ..Mezzasalma, A.M., Caridi, F.  
[Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms](#), 2006, 247(2), pp. 261–267
- [Temperature measurements in plasmas produced by high-power lasers interacting with solid targets](#)  
Torrisci, L., Gammino, S., **Picciotto, A.**, ..Rohlina, K., Wolowski, J.  
[Review of Scientific Instruments](#), 2006, 77(3), 03B708
- [Measurements of gas diffusion in polyethylene irradiated by 5 MeV electron beams](#)  
Torrisci, L., Ilacqua, A., Caridi, F., **Picciotto, A.**, ..Trifirò, A., Audatore, L.  
[Radiation Effects and Defects in Solids](#), 2006, 161(1), pp. 3–13

- [\*Production of highly charged heavy ions by means of a hybrid source in dc mode and in afterglow mode\*](#)  
[Gammino, S., Ciavola, G., Torrisci, L., \*\*Picciotto, A.\*\*, ...\*\*Shirkov, G.D.\*\*, Hitz, D.](#)  
[AIP Conference Proceedings](#), 2005, 749, pp. 15–18
- [\*Temperature measurements in plasmas generated by using lasers at different intensities\*](#)  
[\*\*Picciotto, A.\*\*, Torrisci, L., Gammino, S., ...\*\*Laska, L.\*\*, Wołowski, J.](#)  
[Radiation Effects and Defects in Solids](#), 2005, 160(10-12), pp. 705–713
- [\*Production of ion and electron streams by pulsed-laser ablation of Ta and Cu\*](#)  
[Margarone, D., Torrisci, L., \*\*Picciotto, A.\*\*, Caridi, F., Gammino, S.](#)  
[Radiation Effects and Defects in Solids](#), 2005, 160(10-12), pp. 515–524
- [\*RBS analysis of ions implanted in light substrates exposed to hot plasmas laser-generated at PALS\*](#)  
[Torrisci, L., Gammino, S., \*\*Picciotto, A.\*\*, ...\*\*Calcagnile, L.\*\*, Quarta, G.](#)  
[Radiation Effects and Defects in Solids](#), 2005, 160(10-12), pp. 685–695
- [\*Carbon nanocrystals produced by pulsed laser ablation of carbon\*](#)  
[Mangione, A., Torrisci, L., \*\*Picciotto, A.\*\*, ...\*\*La Mantia, A.\*\*, Di Marco, G.](#)  
[Radiation Effects and Defects in Solids](#), 2005, 160(10-12), pp. 655–662
- [\*Neutrals' temperature in laser-generated plasma at LNS\*](#)  
[Caridi, F., Torrisci, L., \*\*Picciotto, A.\*\*, ...\*\*Margarone, D.\*\*, Krasa, J.](#)  
[Radiation Effects and Defects in Solids](#), 2005, 160(10-12), pp. 639–645
- [\*Retrieval of currents of multiply charged ions emitted from laser-produced carbon plasma\*](#)  
[Kráska, J., Torrisci, L., \*\*Picciotto, A.\*\*, ...\*\*Láska, L.\*\*, Rohlena, K.](#) [Radiation Effects and Defects in Solids](#), 2005, 160(10-12), pp. 609–619
- [\*Modification of materials by high energy plasma ions\*](#)  
[Lorusso, A., Belloni, F., Doria, D., \*\*Picciotto, A.\*\*, ...\*\*Quarta, G.\*\*, Bleiner, D.](#)  
[Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms](#), 2005, 240(1-2), pp. 229–233
- [\*Production of highly charged heavy ions by means of a hybrid source in DC mode and in afterglow mode\*](#)  
[Gammino, S., Ciavola, G., Torrisci, L., \*\*Picciotto, A.\*\*, ...\*\*Shirkov, G.D.\*\*, Hitz, D.](#) [Plasma Processes and Polymers](#), 2005, 2(6), pp. 458–463
- [\*Measurements of equivalent ion temperature in plasma pulse laser-generated at infn-lns and pals\*](#)  
[Torrisci, L., Gammino, S., \*\*Picciotto, A.\*\*, ...\*\*Rohlena, K.\*\*, Wołowski, J.](#)  
32nd EPS Conference on Plasma Physics 2005, EPS 2005, Held with the 8th International Workshop on Fast Ignition of Fusion Targets - Europhysics Conference Abstracts, 2005, 2, pp. 794–797

- [\*The electron cyclotron resonance coupled to laser ion source for charge state enhancement experiment: Production of high intensity ion beams by means of a hybrid ion source\*](#) [Gammino, S., Torrisi, L., Ciavola, G., \*\*Picciotto, A.\*\*, Hitz, D., Shirkov, G.D.](#) [Journal of Applied Physics](#), 2004, 96(5), pp. 2961–2968
- [\*Pulsed laser ablation of gold at 1 064 nm and 532 nm\*](#) [Torrisi, L., \*\*Picciotto, A.\*\*, Andò, L., ..Pfeifer, M., Krása, J.](#) [Czechoslovak Journal of Physics](#), 2004, 54(SUPPL. 3)
- [\*Highly charged heavy ion generation by pulsed laser irradiation\*](#) [Gammino, S., Torrisi, L., Ciavola, G., ...Krasa, J., \*\*Picciotto, A.\*\*](#) [Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms](#), 2003, 209, pp. 345–350

Autorizzo il trattamento dei miei dati personali ai sensi della normativa italiana sulla protezione dei dati personali (art. 13 D.Lgs. 196/2003) e dell'art. 13 del GDPR 679/2016.

In Fede  
Antonino Picciotto

Trento, li 26/05/2026