

## Curriculum Vitae, Dr. Antonino Picciotto, PhD

**First Name:** Antonino

**Family Name:** Picciotto

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### ➤ Actual position and research interests in brief – 2006/2025

**Since 2006**, Dr. Antonino Picciotto has been working at Fondazione Bruno Kessler (FBK) in the Micro-Nano Fabrication Facility Division (MNF) is R&D researcher and clean room process engineer.

**From 2021 to 2025** he coordinated the research and development activity of the MNF clean rooms as Senior Researcher. Since July 2025, Dr. Picciotto has been coordinating the Front-End activity for the MNF unit.

In this role, he was working on the realization and microfabrication of particle and radiation detectors for scientific and industrial applications, participating and leading national and international projects with research institutes as the Italian National Institute of Nuclear Physics (INFN), Italian National Institute of Astrophysics (INAF), universities as Politecnico di Milano and many others, and private international companies.

In the MNF group, **since 2006**, he was R&D responsible for PECVD (plasma enhancement chemical vapor deposition), LPCVD (low-pressure chemical vapor deposition), ion implantation and ellipsometry systems.

**From 2010**, Dr. Picciotto was leading and coordinating for FBK, a pioneering activity in the design and realization of advanced materials, based and non-based on silicon technology, for application to non-conventional particles acceleration systems (laser-driven) and to the clean nuclear fusion reaction processes in collaboration with European partners as the Prague Asterix Laser System (PALS) facility, the HILASE Institute and in particular with the pan-European project defined as, Extreme Light Infrastructure institute (ELI-ERIC), in Prague, Czech Republic.

**In this framework in 2013**, winning an international Laser Lab European project by the, he led as PI an international teams of scientists from several countries in a pioneering experiment in the field of the ultra-clean laser driven boron proton nuclear fusion, demonstrating for the first time the feasibility of the latter by an advanced boron-hydrogen silicon target produced in the Micro-Nano Facility clean room of FBK. The above experiment was carried on at the at the PALS laboratory (Czech Republic).

The success of these kinds of experiments has led to the publication of several works in high impact journals **and in 2016** to the publication in the journal called Fusion, in collaboration with the Nobel Prize winner for physics professor Gerard Morou.

He is involved, as Fondazione Bruno Kessler proponent, in a series of preliminary experiments on the possibility to enhance the efficacy of the standard proton-therapy techniques, by the injection of the ultra-clean boron-proton fusion, in collaboration with the INFN-LNS Institute, the ELI-ERIC Institute and many others.

Together with scientific activities, Dr. Picciotto **since 2012** worked and coordinated the activity of scouting, tenders writing and systems acquisition and acceptance for FBK and for the MNF facility like the FESR\_1 and FESR\_2 (Fondo Europeo di Sviluppo Regionale) projects as well as the IPCEI\_ME/CT (Importanti Progetti di Comune Interesse Europeo) and the WBG\_Chips Act JU (Wide Band Gap, Chips Act Joint Undertaking) for the development and realization of new laboratories and new technologies in the framework of the silicon carbide based processes, germanium of silicon devices and integration. In this framework **since 2024**, Dr. Picciotto is coordinating the total acquisition of the systems and machinery for FBK.

### ➤ Education

**2006:** PhD in Nuclear Physics at the University of Messina and at the Italian National Institute of Nuclear Physics, with a thesis work titled: “*Temperature characterization of plasmas generated by high power pulsed lasers*”. This work was supported by the INFN projects named as *PLAIA (Plasma Laser Ablation for Ion*

*Acceleration*) and *PLATONE* (*Plasma Laser Ablation to Obtained Near Electrical field*). During the PhD course, he worked also at the National Institute of Nuclear Physics (INFN) in Catania, and he carried out a Marie Curie Fellowship stage 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.

**2002:** Master's degree in applied physics: in the field of laser plasma systems at University of Messina and at Italian National Institute of Nuclear Physics-South National Laboratories (INFN-LNS) in Catania, with a thesis title: "*A study of non-equilibrium plasmas generated by infrared pulsed laser*". This work was supported by the INFN project *ECLISSE*.

**1996/1997:** Diploma from the State Nautical Technical Institute "Caio Duilio" of Messina, "captains" specialization

➤ Main results achieved on detectors realization:

**Since August 2006:** Dr. Picciotto was involved at Fondazione Bruno Kessler, as class A clean room process engineer in the realization of several kinds of particles and radiations silicon detectors, like silicon solar cells, phototransistors, silicon photo multiplier (SiPM) and very low noise silicon drift detectors (SDD). In this last sector, Dr. Picciotto contributed directly on the realization of many type of large areas detectors in the framework of the INFN-REDSOX project and the ESA (European Space Agency) – ASI (Italian Space Agency) – CNSA (Chinese National Space Agency) projects, define first as LOFT (Large Observatory For X-ray Timing) and then as *eXTP (enhanced X-ray Timing and Polarimetry)* where in 2016 his group, MNF, realized the largest monolithic silicon drift detectors fully functional in the world.

**Dr. Picciotto was visited researcher in 2013 and in 2016**, at the Horiba ltd Company in Kyoto, Japan, as micro technology expert consultant for the Horiba personnel in the framework of silicon drift detectors realization for the NEXRAY-Horiba project.

➤ Main national and international scientific and industrial projects in the field of the nano-micro technologies and on the radiation and particle detectors field from 2006 to today:

➤ **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*

➤ Main national and international scientific and industrial projects in the field of nuclear fusion related applications from 2022 to today:

▪ **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.

➤ Project Leader for international experiments from 2012 to today:

- 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

➤ Editorial Activities for Scientific Journals

- ❖ 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>

➤ Reviewer Activities for the following Scientific Journals

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

➤ Inventor or Co-Inventor of International Patents

- ✓ 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.Ficarella, 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.Ficarella, D.Matsunaga, K.Yasui, N.Zorzi: “Radiation detector and radiation detector device” WO2018225563 (A1) published 2019-01-09

➤ Invited talks to international conferences.

- 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/>)

➤ Oral Communications to international conferences

- 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

➤ Scientific awards

- **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 of Understanding

**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,

➤ Conferences organization and scientific committee

- **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

➤ Scientific Associations

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

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

➤ National Scientific Qualification for University Teaching 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

➤ Academic activities

- **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

➤ Didactical Experience as Professor Assistant at the Physics Department of University of 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);

- Didactical Experience as Professor for the 2° Master level on nano and microtecnology at Trento University Physics Department and at 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
  - University tutor and co-tutor of the following PhD thesis
- **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
- Knowledge of languages:
  - ✓ English: (fluently) B2
  - ✓ B1\_ PET certification received during university degree course
  - ✓ Italian: (mother tongue)
- Peer Review Publications inserire

Dr. A.Picciotto is author or co-author, of **159 papers** on international scientific peer review journals and conference proceedings (Scopus source). **Currently, his h-index is 27 with 2886 citations** (Nov\_2025)

- *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. Tchórz, A. Trifirò, 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 Article Open Access 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., Tacke 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., Choukurov 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., Iaria 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., Řípa 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, 090-024-10493-5
- Borane (**BmHn**), 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 1013–1015 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*  
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