

Diletta Sciti - Curriculum vitae

Diletta Sciti, PhD, research executive at the Institute of Science and Technology for Ceramics (ISTEC). Her activity as permanent researcher in ISTEC started in 2001.

Education: Master Degree in Physics cum laude, University of Bologna (1995), PhD in Engineering at the Kyoto Institute of Technology, Kyoto, Japan (2007).

Present research field: processing and characterization of structural ceramics and UHTCs (monolithic, particulate and fibre - reinforced) for high temperature/severe environment applications; sintering techniques; study of the relationship between processing, microstructure and properties.

Appointments:

- 2013 - present: UHTC and Structural Ceramics Group leader
- 2019 - present: PhD Faculty Board Member in Science and Technology for Materials - University of Parma
- Supervisor/Tutor of master and PHD students, visit researchers.
- Invited expert for evaluation of ERC proposals and National Science Foundation proposals.
- Member of committees in open competitions for ISTEC research contracts and fellowships

Past appointments:

- 2010 - 2015: Member of ISTEC Institute Scientific Council;
- 2013 - 2018: Member of the International Advisory Panel of the XMAT project – UK.

Projects/Grants:

- 2020-2023: Responsible of ISTEC Unit in AM3aC2A - Approccio Multiscala per la Modellazione di Materiali CMC e UHTCMC per Componenti Riutilizzabili per l'Aerospazio, funded by ASI (Italian Space Agency).
- 2016-2020: Coordinator in H2020 "Next Generation Ceramic Composites for combustion harsh environments and space" -C3HARME -GRANT n° 685594, NMP-19-2015, Total funding 8M€.
- 2019-2023: Coordinatore Sotto progetto Linea 3 "Materiali avanzati per fusione magnetica" JOINT RESEARCH AGREEMENT "FUSIONE" ENI-CNR.
- 2018-2020: PI in "BALTIC - Development and engineering of high performance ballistic protection systems based on TiB₂-B₄C ceramic composites" Piano Nazionale Ricerca Militare, funded by Ministero della Difesa.
- 2016-2018: PI in "Ultrahigh Temperature Ceramic Matrix Composites by Additive Manufacturing Using Polymer Precursors" Progetto di Grande Rilevanza funded by Ministry of Foreign Affairs (MAECI).
- 2014-2018: Responsible of ISTEC Unit in FP7-STAGE-STE, "Scientific and Technological Alliance for Guaranteeing the European Excellence in Concentrating Solar Thermal Energy", Grant agreement no: 609837).
- 2012-2014: PI in "SMARP - Development of ultra-ablation resistant ceramics for application in the propulsion" Piano Nazionale Ricerca Militare, funded by Ministero della Difesa.
- 2011-2015: PI in "Characterization of Ultra-high Temperature Ceramics via Transmission electron Microscopy" GRANT FA8655-12-1-3004 supported by - AFOSR, Air Force Office of Scientific Research.
- 2010-2015: Responsible of ISTEC Unit in PON – SOLTESS, Solar Thermal Energy Solid Storage.
- 2010-2013: PI in "High strength and toughness ultra high temperature ceramics reinforced by fibers and carbon nanotubes". Bilateral Project in the framework of the agreement CNR (Italy)/SAV (Slovak).
- 2010-2012: Responsible of ISTEC unit in the European Project E²PHEST²US, "Enhanced Energy Production of Heat and Electricity by a combined solar Thermoionic -Thermoelectric Unit System" (GRANT n°241270).
- 2009-2010: PI in "Characterization of Ultra-high Temperature Ceramics via Transmission electron Microscopy". Duration 1 year. RESEARCH GRANT FA8655-09-M-4002, supported by EOARD (European Office of Aerospace Research and Development).

Technology transfer and consultancy for industries:

Research Manager in several contracts from Italian companies for R&D activity focused on innovative ceramic-based components, process and product quality control, technology transfer, including:

- 2020-2022: Research contract with Industrie Bitossi Spa for research on “Structural ceramics based on SiC and B4C”.
- 2011 and 2015: Services to Industrie Bitossi Spa, for research on “Alumina –based structural ceramics”.
- 2011: Contract from CIRA (Italian Aerospace Research Center), “Production and characterization of short fiber reinforced ZrB2-based Ceramics”. Duration 1 year.
- 2008-2010: Contract from MBDA Missile Systems “Design and Development of nano-structured ceramic materials for realization of electromagnetic windows in the MMW band”. Duration 3 years.

International Conferences organization:

- 2019, Local symposium organizer: “Advanced structural ceramics, composites and refractories”, ECERS 2019 Turin, IT.
- 2017, Member of scientific committee and organizing committee in CERMODEL 2017, Modelling and simulation meet innovation in Ceramics technology, July 26-28, 2017 Trento, IT.
- 2017, Organizing committee member in ECI conference, Ultra-high temperature ceramics: Materials for Extreme Environment Applications IV.
- 2017, Chair of Topic 2: High temperature processes and advanced sintering, ECERS 2017, Email from Conference Organizers in data 2/10/2016.
- 2016, International Advisory Board member and co-organizer of symposium M on "MAX phases and UHTC in ICC6 (6th International Congress on Ceramics), august 21-25 2016, Dresda.
- 2015, Co-chair of Structural Ceramics symposium in the 14th International Conference of the European Ceramic Society, 21-25 giugno 2015, Toledo Spain.

Bibliography and Patents:

- 209 publications in peer review journals. Scopus h-index = 39, total citations >5400);
- 10 patents;
- Member of the Editorial Board in Journal of Ceramic Science and Technology since 2016.

Keynotes:

- 30 Keynote/Invited Lectures at international conferences.
- Invited speaker at Technical Information Exchange Meeting (at AFOSR, Arlington VA) in the framework of IT-US Defence Science & Technology Dialogue, organized by the Italian Defense General Secretariat and the Embassy of Italy in Washington DC (May 2013);
- Invited speaker at the US –Italy JCM Advanced Materials (11-15 April 2015, Italy) organized by CNR, AFOSR, Embassy of Italy, CIRA.

Awards:

- 2014 - Best Patent Italia 2013, MBDA Innovation Awards, Roma, 6/3/2014 - CERAMIC MATERIAL FOR RADOME, RADOME AND PROCESS FOR THE PRODUCTION THEREOF, Pat. No. WO/2013/124871, International Application No.: PCT/IT2012/000052.
- 2014 - 2 & 3 Stars Innovation Award Event, MBDA-Paris, 13/05/2014, ibidem.