

# CURRICULUM VITAE DANIELA ASCENZI

## PERSONAL DETAILS & CONTACTS

ResearcherID K-8888-2019

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## EDUCATION & QUALIFICATION

2012 “Abilitazione Scientifica Nazionale” to associate professor in the Chemical Sciences (in sectors 03/B1 “Fondamenti Delle Scienze Chimiche e Sistemi Inorganici” and 03/B2 “Fondamenti Chimici delle Tecnologie”)

1998 PhD in Chemistry, University of Perugia, Italy

1995 “Abilitazione” to the chemical profession, University of Perugia, Italy.

1993 Master’s degree (Laurea) in Chemistry (summa cum laude), Univ. of Perugia, Italy

## PROFESSIONAL POSITIONS

1/10/14-to date Associate professor of General and Inorganic Chemistry (CHIM03 03/B1), Department of Physics, University of Trento, Italy

2005-30/09/14 Researcher in General and Inorganic Chemistry, Dept. Physics, Univ. Trento, Italy

## POST GRADUATE POSITIONS / FELLOWSHIPS

2000 – 2004 post-doc (group of Prof. Davide Bassi), Dept. Physics, Univ. of Trento, Italy

1998 – 2000 post-doc (group of Prof. Andrew J. Orr-Ewing), School of Chemistry, Univ. Bristol, UK

## RESEARCH INTERESTS / ACTIVITIES

D.A.’s activity is focused on gas-phase physical chemistry and on astrochemistry, molecular astrophysics and prebiotic chemistry. Area of expertise: elementary processes and reaction dynamics of charged systems via mass spectrometry and guided ion beam techniques; structure and reactivity of singly and multiply charged ions; chemical reactions in the interstellar space and planetary atmospheres; plasma chemistry; photoionization and photodissociation dynamics via lasers and synchrotron radiation; alignment/orientation in molecular beams

## SCIENTIFIC COLLABORATIONS

D.A. has collaborated with experimental and theoretical groups: R. Thissen & C. Alcaraz (CNRS & Univ. Paris Saclay); W. Geppert (Astrobiology Center, Stockholm University); C. Ceccarelli, V. Vuitton (IPAG Grenoble); N. Balucani, F. Pirani, D. Cappelletti (Univ. Perugia); D. Schroeder, M. Polasek, J. Zabka (Academy of Science of the Czech Republic); R. Fortenberry, Univ. Mississippi (USA); J. Roithova (Charles Univ. Prague); A. Aguilar (Universitat de Barcelona); P. Bolognesi, L. Avaldi (CNR & Elettra Sincrotrone Trieste)

## RESEARCH OUTCOMES, CONFERENCES

Co-author of > 80 scientific publications on international peer-reviewed journals, some of which in high IF (including Nature, JACS, Phys. Rev. Lett). Her publications collected over 1916 citations, H-index=24 on ISI WoS (19/1/2021), over 2246 with H-index=25 on GoogleScholar (19/1/2021), and over 1875, H-index=24 on Scopus (19/1/2021). She has presented the results of her research as invited talk to over 40 national and international conferences

## FUNDING & RESEARCH PROJECTS

- 2019- present: PI of the Trento unit of the H2020-MSCA-ITN-2018 project ACO-AstroChemical Origins
- 2019- present: COST Action MD-GAS Molecular Dynamics in the Gas Phase
- 2014-18: COST Action CM1401 Our-astrochemical history
- 2012-17: COST Action CM1204 XUV/X-ray light and fast ions for ultrafast chemistry (XLIC)

- 2010-13: COST Action CM0805 The Chemical Cosmos: Understanding Chemistry in Astronomical Environments
- 2010-12: PI, bilateral research program CNR-AVCR Ion-molecule reactions relevant to Titan's ionosphere
- 2007-09: PI, bilateral research program CNR-AVCR "Gas-phase chemistry and physics of new rare-gas compounds"
- 2009-present: PI of various successful beamtime applications at SOLEIL and ELETTRA Synchrotron Radiation Facilities
- 2006-07: Member UNITN Unit "Progetto di Rilevante Interesse Nazionale" (PRIN 2005) on "Studio sperimentale di processi collisionali nei plasmi e nei fasci supersonici. Applicazioni alle tecnologie energetiche, ambientali, e delle nano-strutture"

## APPOINTMENTS

- reviewer for international journals: J. Phys. Chem, Phys.Chem.Chem.Phys, Int.J.Mass Spectrom, JACS, Chem. Phys. Lett., Analyst, Frontiers in Chemistry, ACS Earth and Space Chemistry, J. Anal. & Appl.Pyrol. Applied Spectroscopy
- reviewer for funding agencies: ASI (Italian Space Agency), National Science Foundation USA, European Commission, Latvian Council of Science

## MEMBERSHIPS

- Member of the Italian Chemical Society (SCI)
- Member of the International Scientific Committee of SASP (Symposium on Atomic, Cluster and Surface Physics)
- Member of the Scientific Board of SIA (Italian Society of Astrobiology)
- Program Committee Member of the Computational Astrochemistry Workshops of Annual International Conference on Computational Science and Applications: ICCSA 2020, July 2020 – on line event; ICCSA 2019, July 1 - 4, 2019, Saint Petersburg (Russia) ICCSA 2018, July 2 - 5, 2018, Melbourne (Australia)
- Guest Editor of the special issue of CAMOP Section of Physica Scripta 76 (3) 2007, featuring Comments from MOLEC XVI
- Chairperson and organizer of MOLEC XVI European Conference on Dynamics of Molecular Systems, Levico Terme 11-15 September 2006

## TEACHING ACTIVITY (at the University of Trento)

- 2018-to date: lecturer of "Environmental Physical Chemistry", MS in Environmental Meteorology
- 2011-to date: lecturer of "General and Inorganic Chemistry", BS in Biomolecular Science and Technologies
- 2008-2019: lecturer (for the laboratory classes) in "General Chemistry with Laboratory", BS in Physics
- 2012-2013 and 2006-07: lecturer "Laboratory of Energy Conversion Processes", MS in Physics
- 2008-2010: lecturer (for the laboratory classes) in "General and inorganic Chemistry", BS in Biomolecular Science and Technologies
- 2006-2007: lecturer (for the laboratory classes) in "Physics III", BS in Physics

## TUTORING

- Supervisor of 4 PhD students in Physics, Doctoral School in Physics, Univ. Trento and several BS and MS students in Physics.
- Member of the examining board for PhD thesis in Physics and Chemistry at national and international level: 2021 (PhD in Chemistry, Univ. Perugia), 2019 (PhD in Physics, Univ. Trento), 2018 (PhD in Physics, Univ. Trento); 2017 (PhD in Chemistry, Univ. Perugia & PhD in Physics, Univ. of Rennes, FR); 2010 (PhD in Physics, Stockholm University)

### **LOCAL APPOINTMENTS (Univ. Trento)**

- 2020-to date: representative of the Physics Dept. for the Scholars at Risk program
- 2020-to date: representative of the Physics Dept. for disability, specific learning disability, and special needs
- 2015-to date: representative of the Physics Dept. for Gender Equality and Diversity
- 2009-present: delegate for the stage and placement of students in the BS and MS degrees in Physics
- 2014-17: member of the Executive Board of the Physics PhD program

### **EDUCATIONAL and PUBLIC OUTREACH**

- Virtual tour for Sharper Night - La Notte europea dei ricercatori, 24th September 2021, MUSE, Trento “Tour Virtuale – Laboratorio di fisica e astrofisica molecolare del Dipartimento di Fisica”
- 2016-2019: coordinator for the Dept. Physics, Univ. Trento of the SummerLab initiative for primary school children
- 2016: seminar on “Astrochimica: le molecole all’origine della vita nell’universo” within the UNITN initiative #bethechange to favour exploration of STEM subjects among high school female students
- 2015: public speech on “Astrochimica: le molecole all’origine della vita nell’universo” within the initiative related to scientific dissemination at high school level, Liceo Scientifico Rosmini, Rovereto