Personal Data			
Surname	Name	Organization and Position	Date of birth
DONDI	Daniele	University of Pavia- Department of Chemistry Associate Professor	9/10/1972
Education and training			

### Education and training

- 2016, Associate Professor in Chemistry, University of Pavia (Italy)
- 2004, PhD in Chemical Sciences, University of Pavia (Italy)
- 2004, SAFI (Scuola Avanzata di Formazione Integrata) certificate, released by I.U.S.S. Istituto Universitario di Studi Superiori Pavia (Italy)
- 2000, MSc Degree in Chemistry, University of Pavia (Italy)

### Professional experience

DD is the Director of the Laboratory of Radiation Chemistry and EPR Spectroscopy.

Graduated in organic chemistry with a thesis on photochemistry. During his PhD he developed a new photocatalyst for synthesis through photoinduced radical reactions. The knowledge acquired on radical reactions has revealed useful for his studies in radiation chemistry and pyrolysis.

His research interests are the study and application of radical reactions for the investigation of polymers (and biopolymer) degradation and functionalization as well as the application of pyrolysis on biomass waste valorisation. DD is also involved in computational and experimental studies on reactions mechanisms relevant to origins of life.

### **Selected Scientific Publications**

## SCOPUS-indexed publications: 147, citations 5819 H-index 37 (April 2024)

- 1. Vadivel, D., Speltini, A., Zeffiro, A., ...Buttafava, A., Dondi, D. 2017. Reactive carbons from Kraft lignin pyrolysis: Stabilization of peroxyl radicals at carbon/silica interface. Journal of Analytical and Applied Pyrolysis, 128, pp. 346–352
- 2. Girometta, C., Picco, A.M., Baiguera, R.M., ...Pellegrini, M., Savino, E. 2019. Physico-mechanical and thermodynamic properties of mycelium-based biocomposites: A review. Sustainability, 11(2), 281
- 3. Speltini, A., Sturini, M., Maraschi, F., ...Dondi, D., Profumo, A. 2016. Preparation of silica-supported carbon by Kraft lignin pyrolysis, and its use in solid-phase extraction of fluoroquinolones from environmental waters. Microchimica Acta, 183(7), pp. 2241–2249
- 4. Bolognesi, S., Bernardi, G., Callegari, A., Dondi, D., Capodaglio, A.G. 2021. Biochar production from sewage sludge and microalgae mixtures: properties, sustainability and possible role in circular economy. Biomass Conversion and Biorefinery, 11, 289–299
- Capodaglio, A.G., Dondi, D. 2016. Selective extraction of liquid fuel from urban wastewater sludge by microwave-controlled pyrolysis. European Biomass Conference and Exhibition Proceedings, 2016 (24thEUBCE), pp. 1270–1274Ravelli, D., Dondi, D., Fagnoni, M., Albini, A. Photocatalysis. A multifaceted concept for green chemistry Chemical Society Reviews, 2009, 38(7), pp. 1999–2011
- 6. Branciforti, D.S., Lazzaroni, S., Milanese, C., ...Pasini, D., Dondi, D. Visible light 3D printing with epoxidized vegetable oils Additive Manufacturing, 2019, 25, pp. 317–324

### Selected most cited papers (in parentheses the number of citations)

- 1. Photocatalysis. A multi-faceted concept for green chemistry Chemical Society Reviews, 2009 (952)
- 2. Photocatalysis for the formation of the C-C bond Chemical Reviews, 2007 (742)
- 3. Physico-mechanical and thermodynamic properties of mycelium-based biocomposites: A review *Sustainability* 2019 (123)
- 4. Sunlight-promoted photocatalytic hydrogen gas evolution from water-suspended cellulose: A systematic study *Photochemical and Photobiological Sciences*, 2014 (111)

### **Grants/Patents**

- Research Module Coordinator in the project NODES [2023-] MUR M4C2 1.5 of PNRR funded by the European Union - NextGenerationEU (Grant agreement no. ECS00000036)
- Coordinator for the group of Chemistry in the project CH4rLiE [2023-] PRIN-PNRR CUP F35D230085100001
- Principal Investigator for the project WAKEUP [2023-] PNRR F17G22000190007 SPOKE 2 WAste cooking oils: biopolymers Upgrading
- Investigator in the Pavia Unit of the project INPLANTOMICS [2023-] Twinning Horizon Europe Project N° 101078905.

#### Past Projects:

- Principal Investigator in the project MATER Myco-Advanced leaTher matERials, Advanced materials project funded by Cariplo Foundation. (10/2019-9/2021)
- Local Unit Coordinator in the project BIO-CHEAPER (BIOmasses Circular Holistic Economy Approach to Energy equipments). Ministry of University and Research PRIN 2017 [2019-2023].
- Principal Investigator in the project STEREO 3D [2017-2018] funded by Regione Lombardia-INSTM for the study on resins for 3D photo-induced printing
- Unit Coordinator in the project DI\_GAS [2012-2014] "Treatment of gaseous and liquid wastes in advance filtration systems.
- Unit Coordinator in the project BiCe [2010-2013] Production of Bioethanol from Cellulose
- Investigator in the project ELASTORAD [2008-2011] funded by the Ministry of Research on the
  use of ionizing radiations, photochemistry and nanochemistry for proceeses and materials in
  tyres fabrication

#### Patent:

Photosensitive composition for 3D printing PCT/IB2018/057998, WO/2020/079470, EP3867704, US20220001620

## Teaching activities

Chemistry for Civil Engineers (University of Pavia, 9 Credits)

Chemistry for industrial engineers (University of Pavia, 6 Credits)

Organometallic Chemistry for Chemists (I. magistrale) at University of Pavia – Department of Chemistry (6 Credits).

PhD course on Origins of Life (24 hours, 6 credits)

PhD course "Progressive 3D printing in applied sciences" (12 hours)

PhD course "La sfida globale dell'inquinamento da plastica: cause, impatti, soluzioni" (2 hours)

Chief Organizer for the WISOL International Winter School on Origins of Life in the years 2023 and 2024

#### **Associations**

# DD is currently member of:

- INFN (Istituto Nazionale di Fisica Nucleare, National Institute of Nuclear Physics)
- ISSOL (International Society for the Study of the Origin of Life)
- SIA (società Italiana di Astrobiologia, Italian Astrobiological Society) with the role of Scientific Advisor
- GIRSE (Gruppo Italiano di Risonanza di Spin Elettronico, Italian Group of Electron Spin Resonance)
- SIRR (Società Italana per la Ricerca sulle Radiazioni, Italian Society for the Research on Radiations)
- PTS (Parco Tecnico Scientifico, Scientific Incubator for startup) in Pavia as Member of the Management Board with the role: Scientific Advisor

All information in this resume is right and truthful. I hereby consent to the processing of the data I provided in this CV.