

LUCA CAPALDO

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PROFILE | Ph.D. Student in Chemical and Pharmaceutical Sciences (XXXI cycle) at the University of Pavia.
Graduated in Chemistry in 2015 under the guidance of Prof. Maurizio Fagnoni and Prof. Luisa De Cola, working on OLEDs, bioimaging, and superconductors.

RESEARCH INTEREST | My research focus on the development of new ways to harness light and trigger chemical reactions via radical intermediates under mild conditions, in accordance with the general principles of Green Chemistry. At the University of Pavia (PhotoGreen Lab), I am developing novel photocatalytic approaches for ecosustainable synthesis, both in the field of photoredox catalysis and photocatalytic hydrogen atom transfer.

WORK EXPERIENCE | **PHD STUDENT UNIVERSITY OF PAVIA**

OCTOBER 2015 - PRESENT

I undertook my PhD project entitled "*Novel Photocatalytic Approaches for Ecosustainable Synthesis*" under the guidance of Prof. Maurizio Fagnoni and supervising of Dr. Davide Ravelli. Main focus is on photocatalyzed processes exploitable for organic synthesis.

INTERNSHIP UNIVERSITY OF PAVIA

MARCH 2015 – JULY 2015

I deepened the use of Mallory reaction for the synthesis of *n*-phenacenes as novel organic superconductors.

ERASMUS INSTITUT DE SCIENCE ET D'INGENIERIE SUPRAMOLECULAIRES

OCTOBER 2014 – FEBRUARY 2015

I spent five months in Strasbourg (France) under the guidance of Prof. Luisa De Cola to study the supramolecular assemblies of planar Pt(II) complexes for bioimaging. Moreover, I studied Zn(II) complexes as cheap materials for OLEDs.

INSTRUCTION | **UNIVERSITY OF PAVIA, PAVIA**

M.SC. (SUMMA CUM LAUDE)

Main courses: Organic Chemistry, Inorganic Chemistry, Mechanisms in Organic Chemistry, Green Chemistry.

Thesis: "*Chemistry for Technology: OLEDs, Bioimaging and Superconductors*"

UNIVERSITY OF PAVIA, PAVIA

B.SC. (SUMMA CUM LAUDE)

Main courses: Photochemistry, Chemistry (Organic, Inorganic, Analytical, Physical), Mathematics, Physics.

Thesis: "*HAT & ET: two competing mechanisms for photocatalyzed reactions*"

SCIENTIFIC HIGH SCHOOL "NICCOLÒ COPERNICO", PAVIA

SCIENTIFIC HIGH SCHOOL DIPLOMA

Main courses: Mathematics, Biology, Physics, Latin, History, Philosophy, Italian & English literature

Thesis: "*The Universe*"

PUBLICATIONS |

- Luca Capaldo, Luca Buzzetti, Daniele Merli, Maurizio Fagnoni, and Davide Ravelli -

"Smooth Photocatalyzed Benzylolation of Electrophilic Olefins via Decarboxylation of Arylacetic Acid" - J. Org. Chem. 2016, 81, 7102–7109

- Luca Capaldo and Davide Ravelli - *"Hydrogen Atom Transfer (HAT): A Versatile Strategy for Substrate Activation in Photocatalyzed Organic Synthesis" – Eur. J. Org. Chem. 2017, 2056–2071 – DOI: 10.1002/ejoc.201601485*
- Luca Capaldo, Maurizio Fagnoni and Davide Ravelli – *"Vinylpyridines as Building Blocks for the Photocatalyzed Synthesis of Alkylpyridines" – Chem. Eur. J. 2017, 23, 6527 – 6530 – DOI: 10.1002/chem.201701346*
- Luca Capaldo, Silvia Garbarino, Stefano Protti, Maurizio Fagnoni, and Davide Ravelli – *"Processi fotocatalitici via anione decatungstato per la sintesi organica" – La Chimica e l'Industria online, ANNO I, n°2, Marzo/Aprile 2017 - DOI: 10.17374/CI.2017.99.2.48*

CONTRIBUTIONS TO CONFERENCES

- Participation to the **workshop** *"Tissue repair: from biochemical mechanisms to formulation approaches"*, May 10th, 2016 (PV)
- Participation to the **school** *"7° Corso Nazionale di Introduzione alla Fotochimica"*, June 6-10th, 2016 (BO)
- **Poster** contribution (Title: *"Smooth Photocatalyzed Benzylolation of Electrophilic Olefins via Decarboxylation of Arylacetic Acids"*, P.A.: Davide Ravelli) at *"4th Workshop Nazionale Green Chemistry – Chimica Sostenibile (GCCS2016)"*, June 10th, 2016 (FI)
- **Poster** contribution (Title: *"Decatungstate Photocatalyzed Radical Additions onto Vinyl (Hetero)Aromatics"*, P.A.: Davide Ravelli) at *"XIX Congresso del Gruppo Interdivisionale di Catalisi (GIC2016)"*, September 11-14th, 2016 (BZ)
- **Oral** contribution (Title: *"Photocatalytic Hydrogen Atom Transfer (HAT) reactions in synthesis"*, P.A.: Davide Ravelli) at *"Joint Congress of the French and Italian Photochemists and Photobiologists"*, September 19-22th, 2016 (BA)
- **Oral** contribution (Title: *"Smooth Photocatalyzed Benzylolation of Electrophilic Olefins via Decarboxylation of Arylacetic Acids"*, P.A.: Luca Capaldo) at *"Merck Young Chemists Symposium"*, October 25-27th, 2016 (RN)
- Participation to the **workshop** *"I Giganti della Fotochimica"*, February 2nd, 2017 (BO)
- **Poster** contribution (Title: *"Sunlight Induced Mallory Photocyclization: An Alternative Route to Substituted [n]phenacenes"*, P.A.: Carlotta Raviola) at *"4th International Workshop on Pericyclic Reactions and Synthesis of Hetero- and Carbocyclic Systems"*, June 28-30th 2017 (MI)
- **Poster** contribution (Title: *"Vinylpyridines Alkylation Triggered by Decatungstate Photocatalyzed Hydrogen Atom Transfer (HAT)"*, P.A.: Luca Capaldo) at *"2nd International Conference on Hydrogen Atom Transfer"*, July 2-6th 2017 (RM)
- **Oral** contribution (Title: *"Antimony-oxo Porphyrins as Visible-Light Photocatalysts for Hydrogen Atom Transfer (HAT) Reactions in Organic Synthesis"*, P.A.: Davide Ravelli) at *"2nd International Conference on Hydrogen Atom Transfer"*, July 2-6th 2017 (RM)

P.A.: Presenting Author

TUTORIAL ACTIVITY | ORGANIC CHEMISTRY (II) UNIVERSITY OF PAVIA MARCH 2017

Reference: Prof. Maurizio Fagnoni

ORGANIC CHEMISTRY (II), LABORATORY UNIVERSITY OF PAVIA MARCH 2017

Reference: Prof. Mariella Mella

PIANO NAZIONALE LAUREE SCIENTIFICHE UNIVERSITY OF PAVIA

JULY 2016

Reference: Prof. Elisa Fasani

ORGANIC CHEMISTRY (I), LABORATORY UNIVERSITY OF PAVIA
MAY 2016

Reference: Dr. Filippo Doria

ORGANIC CHEMISTRY (II), LABORATORY UNIVERSITY OF PAVIA
MARCH 2016

Reference: Prof. Mariella Mella

ORGANIC CHEMISTRY FOR BIOTECHNOLOGY UNIVERSITY OF PAVIA
SEPTEMBER 2015

Reference: Prof. Mauro Freccero

ASSOCIATION | Member of Società Chimica Italiana (SCI) – The Italian Chemical Society
Member of Gruppo Italiano di Fotochimica (GIF) – Italian Group of Photochemistry
Member of European Photochemistry Association (EPA)