

Curriculum Vitae

PERSONAL INFORMATION

Enrico Caruso



📍 University of Insubria Department of Biotechnology and Life Science (DBSV)
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✉ enrico.caruso@uninsubria.it

Gender Male | Date of birth 06 september 1974 | Nationality italian

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
<input type="checkbox"/> Mid-Management Level	X Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

[2000-2001]

Research Fellow

University of Insubria

“Oxidative demolition of supercoiled DNA (Bluescript Plasmid) by the action of tetrapyrrole macrocycles; study for application in photodynamic tumor therapy (PDT)” under the supervision of Prof. Stefano Banfi

Sector –academic research

[2001-2004]

Research Fellow

University of Insubria

“Synthesis of macrocycles of the porphyrin, chlorine and bacteriochlorin class and of the phthalocyanine class: applications as molecular oxygen activators for the photodynamic therapy of tumors” under the supervision of Prof. Stefano Banfi

Sector –academic research

[2005-2022]

Assistant Professor

University of Insubria

Organic Chemistry Researcher (CHIM06)

[2022-on going]

Associate Professor

University of Insubria

Organic Chemistry Professor (CHIM06).

Courses taught: Organic Chemistry and Analytical Chemistry for the Biotechnology Course

EDUCATION AND TRAINING

Postgraduate School in Chemical Synthesis (100/100 cum Laude)

[1998-2000]

Politecnico of Milan

Thesis entitled "Selective synthesis of D-aminoacides and their derivatives" under the supervision of Prof. Stefano Servi

Degree in Chemistry (110/110)

[1993-1998]

University of Milan

Thesis entitled "New strategy of stereoselective synthesis: Michael addition of cyclic and acyclic enone of carbenic complexes with C2 symmetry amines" under the supervision of Prof. Stefano Maiorana

Certificate of Chemical Technician (58/60)

[1988-1993]

ITIS L. Cobianchi Intra (VB)

WORK ACTIVITIES

Editorial activity

Editor of [IJMS] (IF: 5.6) Special Issue: "Materials for Photobiology 2.0"

Invited participations to scientific conferences

2023 – 20th Congress of the European Society for Photobiology, 27 – 31 August, Lyon, France. Oral Presentation as Invited BODIPYs: an emerging class of new photosensitizers
2023 - XXXIV Annual Congress of SIFB, 28 – 30 June, Lecce. Organizer
2022 - XXXIII Annual Congress of SIFB, 19 - 20 July, Bressanone (BZ). Organizer
2021 – XXXII Annual Congress of SIFB, 23-24 June, Varese. Organizer and Chairman of the session "Light and Human Health"
2019 – XXXI Annual Congress of SIFB, 19-21 June, Bologna. Chairman of the session "Nanotechnology-mediated PDT"
2018 - SIFB-Alpe Adria Meeting on Photobiology Udine 20-22 June 2018; Chairman of the session "Antimicrobial Photodynamic Therapy"
2014 - Congresso Annuale 2014 FIFB Trento 11- 13 Giugno 2014. Chairman della sessione di PDT antimicrobica

Research Grants

Active grants:

PRIN2020 – aN InseCt biorEactor for the full valorization of PolyEthylene Terephthalate (NICE-PET) – total grant amount – May 2022 – May 2025 Participant

Completed grants (last 10 years):

PRIN2007 – Ossigenasi batteriche: caratterizzazione genetica e applicazioni in biotrasformazioni – 22/09/2008/ – 21/09/2010 Participant

PRIN2007 – Miglioramento di toluene monoossigenasi batteriche mediante mutagenesi casuale e evoluzione molecolare in vitro – 16/12/2002/ – 15/12/2004 Participant

PERSONAL SKILLS

Mother tongue(s)	Italian
Other language(s)	English <i>Listening B2, Reading B2, Writing B2, Spoken production B2, spoken interaction B1</i> French <i>Listening A2, reading A2, writing A1, Spoken production A2, spoken interaction A2</i> Spanish <i>Listening A2, reading A2, writing A1, Spoken production A2, spoken interaction A1</i>
Professional skills	Extraction techniques Purification techniques (chromatographic techniques) UV-Vis, IR and Fluorescence spectroscopy HPLC LC-MS NMR
Digital skills	Windows Google File sharing softwares: Google Drive, Dropbox, etc. Microsoft Office (WordExcel Powerpoint Outlook) Collaboration Tools (MS Teams, Zoom) Chemical software (ChemDraw, ISIS, ChemSketch, mestrenova) Statistical software (Statistica 7)

ADDITIONAL INFORMATION

Statement of Research Interests	<p>Prof. Caruso participated in two PRINs in 2002 and 2007 respectively. In both of these PRINs he was involved in analytical analyses to identify the hydroxylated BTEXs obtained by microbial biotransformation. From bacterial cultures, BTEXs were recovered through extraction techniques and subsequently identified via HPLC and GC-MS.</p> <p>These techniques were also applied to recognise natural substances extracted from plant origin compounds. The results obtained were published in two scientific papers (DOI: 10.1016/j.mambio.2012.01.003 and DOI: 10.3923/jm.2014.66.81)</p> <p>Over the years in the organic syntheses, Prof. Caruso dealt with solvent extractions, chromatographic purification techniques, and the subsequent analytical techniques (UV-vis, IR, fluorescence, and NMR) for the identification and recognition of newly synthesized organic compounds.</p> <p>Prof. Caruso is currently involved in PRIN2020 with the role of analytic chemist. In this project he deals with the extraction, HPLC, and GC-MS analyses of products biodegraded from polyethylene terephthalate (PET) plastic materials.</p>
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Publications and metrics Total number of publications in peer-review journals (Scopus): 60
Total number of citations (Scopus): 1539
H-index (Scopus): 21

Complete list of publications: <https://www.scopus.com/authid/detail.uri?authorid=7005405772>

Selected relevant publications (max 5):

E. Caruso, P. D'Arrigo, S. Frattini, G. Pedrocchi-Fantoni, S. Servi. A biocatalytic resolution of chiral ketals, intermediates in the synthesis ofazole drugs. *J. Mol. Catal B: enzymatic* 11 (2001) 427-432
DOI: 10.1016/S1381-1177(00)00147-8

Synthesis, purification of the product and subsequent chemical analysis of the product using spectroscopic techniques

F.M. Rubino, A. Martinoli, M. Pitton, D. Di Fabio, E. Caruso, S. Banfi, G. Tosi, L.A. Wauters, A. Martinoli. Food choice of Eurasian red squirrels and concentrations of anti-predatory secondary compounds. *Mammalian Biology* 77(5) (2012) 332-338 DOI: 10.1016/j.mambio.2012.01.003

Extraction of biologically active compounds and purification using chromatographic techniques

S. Banfi, E. Caruso, V. Orlandi, P. Barbieri, S. Cavallari, P. Viganò, P. Clerici, L. Chiodaroli, Antibacterial activity of leaf extracts from *Combretum micranthum* and *Guiera senegalensis* (Combretaceae). *Res. J. Microbiol.* 9 (2) (2014) 66-81. DOI: 10.3923/jm.2014.66.81

Extraction of biologically active compounds and purification using chromatographic techniques

S. Banfi, G. Nasini, S. Zaza, E. Caruso, Synthesis and Photo-Physical properties of a series of BODIPY dyes. *Tetrahedron* 69 (2013) 4845-4856. DOI: 10.1016/j.tet.2013.04.064

Synthesis, purification of the product by extraction and chromatography and subsequent chemical analysis of the product using chromatographic spectroscopic techniques

E. Caruso, M. Gariboldi, A. Sangion, P. Gramatica, S. Banfi, Synthesis, photodynamic activity, and quantitative structure-activity relationship modelling of a series of BODIPYs. *J. Photochem Photobiol B: Biol.* 167 (2017) 269-281. DOI: 10.1016/j.jphotobiol.2017.01.012

Synthesis, purification of the product by extraction and chromatography and subsequent chemical analysis of the product using chromatographic spectroscopic techniques

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV.

Varese 19/01/2026

Signature 