

EUROPEAN  
CURRICULUM VITAE  
FORMAT



PERSONAL INFORMATION

Name

**Maela MANZOLI**

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**<https://orcid.org/0000-0002-4427-7939>**

Nationality

Italian

Date of Birth

06/10/1970

Gender

F

WORK EXPERIENCE

- Dates (from - to)
- Name and address of the employer
- Occupation or position held
- Dates (from - to)
- Name and address of the employer
- Occupation or position held
- Dates (from - to)
- Name and address of the employer
- Occupation or position held

2019-today

Drug Science and Technology Department, University of Turin, V. P. Giuria 9, 10125 Turin Italy

**Associate Professor in Industrial Chemistry**

2016-2019

Drug Science and Technology Department, University of Turin, V. P. Giuria 9, 10125 Turin Italy  
Temporary Researcher RTDB (Legge Gelmini, art. 24 c.3-b L. 240/10)

2005-2016

Department of Chemistry, University of Turin, V. P. Giuria 7, 10125 Turin, Italy.  
Research Technician

EDUCATION AND TRAINING

- Dates (from - to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded
- Dates (from - to)
- Name and type of organisation providing education and training
- Title of qualification awarded
- Dates (from - to)
- Name and type of organisation providing education and training
- Title of qualification awarded

December 5<sup>th</sup> 2013- December 11<sup>th</sup> 2013

European Laboratory of Synchrotron Radiation, Grenoble (France).

Preliminary experiments using a new sample holder cell allowing the simultaneous acquisition of DRIFT and XAS spectra for the proposal CH-5204, beamline BM23 (15-10-2017/18-10-2017).

**Visiting Research fellow**

April 2009

School of Chemistry, University of Southampton, Highfield, Southampton, UK.

**Visiting Research fellow**

April 2008

Bulgarian Academy of Sciences (BAS), Sofia, Bulgaria within the Scientific Cooperation Agreement between the Consiglio Nazionale delle Ricerche (CNR) and the Bulgarian Academy of Sciences. (prot. N. 0019184, 25/02/2008).

**Visiting Research fellow**

- Dates (from - to)
- Name and type of organisation providing education and training
- Title of qualification awarded

- Dates (from - to)
- Name and type of organisation providing education and training
- Title of qualification awarded

- Dates (from - to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded

- Dates (from - to)
- Name and type of organisation providing education and training
- Title of qualification awarded

## PERSONAL SKILLS AND COMPETENCES

*Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.*

MOTHER TONGUE

OTHER LANGUAGE

- Reading
- Writing
- Speaking

## SOCIAL SKILLS

### AND COMPETENCES

*Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.*



2001-2005

Department of Chemistry, University of Turin, V. P. Giuria 7, 10125 Turin, Italy.

## Postdoctoral Research fellow

2001

Faculty of Science/ Dep. of Inorganic, Physical and Material Chemistry/ University of Turin/ Italy.

## PhD in Chemical Sciences

Final dissertation "Study of micro- and nanodispersed metal catalysts for molecular oxygen reduction and electroreduction" Supervisor Prof. F. Boccuzzi

1997-1998

Faculty of Science/ Dep. of Inorganic, Physical and Material Chemistry/ University of Turin/ Italy.

Research grant funded by Edison S.p.A. on "Experimental study on the structural properties of gas diffusion electrodes".

Research fellow

1996

Faculty of Science/ Dep. of Inorganic, Physical and Material Chemistry/ Univ. of Torino

Master Science Degree in Chemistry

ITALIANO

ENGLISH

Good

Good

Good

## Membership of Scientific Societies

1999 – today Associated Member, Italian Chemical Society (SCI)/Associated Member Interdivisional Group of Catalysis (GIC) and Green Chemistry at Italian Chemical Society

2005 - today Consorzio interuniversitario Nazionale per la Scienza e la Tecnologia dei Materiali (INSTM)/ Associated Member

Member of the Scientific Committee of the N.I.S. Center.

## Institutional Responsibilities

2016 – today Member of the Council of Drug Science and Technology Department, University of Turin, Italy

Member of the Research Committee, Member of the Committee for Orienteering, Tutoring and Placement of the Master Degree in Pharmacy and the Master Degree in Pharmaceutical Chemistry and Technology, and the Bachelor Degree in Herbal Products, Member of the Educational Commission and Commissione Didattica Paritetica of Drug Science and Technology Department, University of Turin, Italy

2005-2016 Member of the Council of Department of Chemistry, University of Turin, Italy

Member of the Executive Board of the "Sezione Piemonte e Valle d'Aosta" of the Italian Chemical Society (SCI).

Tutor national **PhD Programme in Innovation for the Circular Economy** - DOT1731183, and level III teaching. **Examiner of PhD thesis and final assessment colloquia.**

**IRIDI** 2017/2018 "Progettazione, conduzione e valutazione di attività didattiche in Università" promoted by the Incubatore di Ricerca Didattica per l'Innovazione/University of Turin.

ORGANISATIONAL SKILLS  
AND COMPETENCES  
*Coordination and administration of  
people, projects and budgets; at work, in  
voluntary work (for example culture and  
sports) and at home, etc.*

**Oral presentations at National and International Congresses**

>20 oral presentations (5 invited), >25 posters. She is co-author of more than 150 contributions (oral presentations and posters) to National and International Congresses.

She attended to about 60 Workshops, National and International Congresses.

**Chairman** of Discussion Symposium 8: "Oxidation and dehydrogenation", 11th European Congress on Catalysis – EuropaCat-XI (Lyon, France, September 1-6 2013).

**Invited session Chair** of "Materials Processes" at the First International Electronic Conference on Processes – Processes System Innovation (IECP2022) to celebrate the 10th anniversary of the Processes journal. Online conference, 17-31 May 2022

2016-02 Member of the Local Organizing Committee for the International Winter School "Molecules @ Surfaces"/ Bardonecchia (TO) – Italy

2007-03 Organizer of the Workshop and NIS Colloquium "Nanostructured Materials for H<sub>2</sub> Production and Purification/ Turin - Italy

**Supervision of graduate students**

Percorso Abilitante Speciale - PAS005 - A013 - Chimica e Tecnologie Chimiche (4 Thesis) borrowed with Percorso abilitante speciale - PAS022 - C240 - LABORATORIO DI CHIMICA E CHIMICA INDUSTRIALE (1 Thesis). a.a. 2013-2014.

1 PhD in Innovation for the Circular Economy.

2 Master Students in Pharmacy, 9 Master Students in Industrial Chemistry, 5 Master Students in Pharmaceutical Chemistry and Technology, 13 Bachelor students in Herbal Products.

Tutor of 2 **Erasmus+ Programmes** with the University of Southampton (UK) and the Universidad de Sevilla (Spain) for students mobility and teaching mobility..

Since 1998 Member of Research Unit of > 20 National and international Projects.

**Selected funded Projects and Research Agreements:**

-2022 Scientific Coordinator and PI of the PRIN Project (Bando 2022) "Waste Innovative Technological Conversion on Heterogeneous catalysts towards Sustainability" (WITHeS), 2 years Project. (Code 20224C35S7).

-2022 Scientific Coordinator and PI of the CRT Project "Processi sostenibili per la produzione di molecole ad attività antivirale a partire da biomasse residue dell'industria agroalimentare piemontese" (Riferimento pratica n.20221804),

-2022 Scientific Coordinator and PI of the Grant For Internationalization (GFI) project "Heterogeneous metal catalysts for photocatalytic reactions carried out in smart 3D printed micro-flow reactors".

-2021 Scientific Coordinator and PI of the Research Agreement with the SME Tyrebirth srl (Italy), 2 years Project "Research and development of an innovative system (based on MW) for recycling and valorisation of end-of-life tires".

-2020 Scientific Coordinator and PI of the Research Agreement with DSM Nutritional Products AG, Wurmisweg 576, CH-4303 Kaiseraugst, Switzerland, 3 years Project "DEVELOPMENT OF LEAD-FREE CATALYSTS FOR SEMI-HYDROGENATION REACTIONS".

-2019 BioEnPro4TO (F.E.S.R. 2014/2020), SMART SOLUTIONS FOR SMART COMMUNITIES: Bioenergie e prodotti sostenibili di Chimica Verde (output) dalla valorizzazione integrata di rifiuti urbani, industriali, biomasse e acque reflue (input), attraverso moduli funzionali intelligenti. 30 months Project. Partner.

-2018 PRIN Project (Bando 2017 Prot. 2017KKP5ZR) "Cutting-edge X-ray methods and models for the understanding of surface site reactivity in heterogeneous catalysts and sensors", 3 years Project. Partner.

-2017 MIUR Individual Funding of Basic Research Activities (art. 1, commi 295 e seguenti, della Legge 11 dicembre 2016 n. 232). Avviso ANVUR n. 20/2017 del 15-06-2017. (3,000 €)

**Publications**

Research Publications in Peer-Reviewed Journals: >160 papers (3 Book Chapters) that have received > 6310 citations (Scopus) citations. **H-index 45** (Scopus).

**2022.** Scientific National Qualification for the section 03/C2 – Industrial Chemistry (CHIM/04), First Level, MIUR/ Italy.

OTHER SKILLS  
AND COMPETENCES

**2013.** Scientific National Qualification for the section 03/C2 – Industrial Chemistry (CHIM/04), Second Level, MIUR/ Italy.

**2013.** Scientific National Qualification for the section 03/B2 – Chemical Fundamentals of Technologies (CHIM/07), Second Level, MIUR/ Italy.

**2012.** Scientific National Qualification for the section 03/A2 – Models and methodologies for Chemical Sciences (CHIM/02), Second Level, MIUR/ Italy.

**2000.** Winner of Philips Award for the paper “Characterisation of Co-based electrocatalytic materials coming from different precursors” IV Scuola P. Giordano Orsini, Trento, Italy. [

Editorial Board Member of Nanomaterials (MDPI) IF 5.076. Guest Editor of the Special Issue “Photocatalysts for organic degradation Catalysts” 2019, 9(10), 870; <https://doi.org/10.3390/catal>

Guest Associate Editor for Frontiers in Chemistry. Topic Editor of the Special Issue “**Women in Green and Sustainable Chemistry 2022**” Frontiers in Chemistry.

Review Editor for Frontiers in Green and Sustainable Chemistry and Frontiers in Chemical Reaction Engineering.

### Peer Reviewer (Journals)

ACS Catalysis, ChemSusChem, Green Chemistry, Applied Catalysis B: Environmental, Journal of Catalysis, Catalysis Science & Technology, Catalysis Today, Catalysis Communication, Physical Chemistry Chemical Physics, RSC Advances, ACS Applied Materials & Interfaces, CrystEngComm, ChemComm, Energy & Environmental Science, Dalton Transaction, Nano Energy, Materials Chemistry and Physics, Current Opinion in Green and Sustainable Chemistry, Applied Surface Science, Materials Research Bulletin, New Journal of Chemistry, Crystal Growth & Design, Materials Today Chemistry.

### Research Overview and Highlights

Maela Manzoli joins the Dipartimento di Scienza e Tecnologia del Farmaco and N.I.S. Center of the University of Torino. Her research activity is focused on the study and characterization of nanostructured materials. She is interested on:

- catalytic activity and properties of heterogeneous catalysts, such as metal nanoparticles (Au, Pd, Pt, Cu, Co, Ru or bimetallic combinations) supported on activated carbon and on different (micro- and mesoporous) oxides (such as TiO<sub>2</sub>, CeO<sub>2</sub>, ZrO<sub>2</sub>, ZnO, Al<sub>2</sub>O<sub>3</sub> and mixed oxides) to establish structure-activity relationships within a process intensification approach. Her skills (in chronological order) deal with:

1) process intensification: study of catalytic reactions (GC, HPLC) carried out in the liquid phase (water, green solvents) by using enabling technologies such as microwaves (MW), ultrasounds (US) and mechanochemistry (ball mill).

2) characterization (FTIR, ATR, DR UV-Vis) and development of nanostructured catalysts working in:

(i) gas-phase reactions: direct synthesis of hydrogen peroxide, Volatile Organic Compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) abatement, synthesis and decomposition of methanol, direct and reverse Water Gas Shift Reaction, CO preferential oxidation in the presence of hydrogen finalised to H<sub>2</sub> production and to fuel cell applications;

(ii) liquid phase reactions: hydrolysis of cellulose and/or lignocellulosic waste biomass to obtain value-added molecules (levulinic acid, hydroxymethylfurfural, gamma-valerolactone, 1,4-pentanediol, etc.), levulinic acid hydrogenation and reductive amination, KA-oil conversion, furfural oxidative esterification to methylfuroate, selective hydrogenation reactions of aldehydes to alcohols and selective oxidation reactions of alcohols to acids.

3) microstructural and structural studies carried out on fresh, spent and cycled catalysts performed with HR-TEM, FESEM, XRD to investigate the active phase dispersion, the crystalline phases of the support as well as the preferred exposed crystal planes and to study the effect of MW, US and ball mill on the catalytic activity of heterogeneous catalysts.

4) synthesis and characterization of nanostructured materials (oxides, mixed oxides and supported nanoparticles) by using enabling technologies such as MW and US.

- nanomaterials for drug delivery. This research focuses on the study of the morphological-structural and surface properties of differently functionalised nanomaterials designed to control and optimise the drug release performances.

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