



Maurizio Vespignani

Nationality: Italian **Date of birth:** 02/07/1998 **Gender:** Male

Phone number: (+39) 3398611791

Email address: Maurizio.vespignani.20@gmail.com

Home: Via del Seminario,10, 47015 Modigliana (Italy)

ABOUT ME

Hi! I'm a guy passionate about science in all its facets. I'm very curious about try to understand the relationship between macroscopic and atomic world.

I'm graduated in Mechanics, Mechatronics and Energy, graduated in Chemistry and Technologies for the environment and materials and even in Industrial Chemistry.

Now i'm working as Ph.D.Student at ISSMC-CNR in Faenza (RA) on Nanomaterials synthesis and characterization following a Safe & Sustainable By Design approach.

WORK EXPERIENCE

Ph.D Student

CNR-ISSMC (former ISTEK) [23/10/2022 – Current]

City: Faenza (RA)

Country: Italy

I work in Nanotechnology and Nanosafety Group mainly with the following tasks:

- Synthesis and characterization of clay-based materials
- Engineer of clay-based materials with inorganic nanoparticles (ex: Fe_3O_4 , Ag, TiO_2) with the aim to obtain a multifunctional composite
- Engineer of ceramic and bioceramic materials like metal oxides with particular properities (ex: photocatalytic, antibacteric, antiviral, pollutant adsorbent)

Chemist

CNR-ISSMC (former ISTEK) [01/02/2022 – 21/10/2022]

City: Faenza (RA)

Country: Italy

- Nanoparticles synthesis using various techniques
- Study of different surfactants and their characterization using different type of techniques such as UV-Vis., FT-IR, SEM-FEG, BET, DLS-ELS, XRD.
- Study of different nanometric systems
- Study of the interaction between nanometric systems and surfactants
- Nanoparticles characterization using different type of techniques such as UV-Vis., FT-IR, SEM-FEG, BET, DLS-ELS, XRD.

Chemist

Alpi S.p.a [21/06/2021 – 30/07/2021]

City: Modigliana (FC)

Country: Italy

- Chemical analysis of pollutants present in wastewater
- Study and analysis of wastewater treatment plants

Mixed farmer

Angelo Celotti [21/09/2020 – 09/10/2020]

City: Marzeno (RA)

Country: Italy

- Grape harvest
- Wine production

Chemist

Sacmi Imola S.c.r.l. [20/04/2020 – 04/06/2020]

City: Imola (BO)

Country: Italy

- Research on the applications of photocatalytic materials applicable in the ceramic field
- Research on the properties of photocatalytic materials and occupied by the main ones
- Research on methods of training and improvement of photocatalysts

Mechatronics technician

Officine Perini S.r.l. [13/06/2016 – 11/07/2016]

City: Modigliana (FC)

Country: Italy

- Design of systems, groups and precision mechanical components
- Realization of assembly systems / equipment
- Revision and drafting of manuals related to the various mechanical components
- Review and modification of projects for the construction of systems and equipment

Mechatronics technician

U. emme S.r.l. [08/02/2016 – 22/02/2016]

City: Modigliana (FC)

Country: Italy

- Construction of agricultural hydraulic backhoes and industrial backhoes
- Construction of industrial sweepers, mixing buckets and snow blades
- Inventory and warehouse

Mechatronics technician

Aurel S.p.a [08/06/2015 – 17/07/2015]

City: Modigliana (FC)

Country: Italy

- Testing of electronic circuits
- Assembly of mechanical components
- Electronic card engraving using the laser machine
- Analysis of internal defects in electronic boards

EDUCATION AND TRAINING

Ph.D in Materials Science and Technology

University of Parma [25/10/2022 – Current]

City: Parma

Country: Italy

Master's Degree in Industrial Chemistry
University of Bologna [15/08/2020 – 21/10/2022]

City: Bologna (BO)
Country: Italy

Thesis title: Development and engineering of new hybrid systems based on inorganic nanoparticles and bio-surfactants
Vote: 104/110

Bachelor's Degree in Chemistry and Technologies for the Environment and Materials
University of Bologna [02/10/2017 – 15/07/2020]

City: Bologna (BO)
Country: Italy

Thesis title: Study of chemical-physical mechanisms that determine the photocatalytic activity of metallic oxides usable in ceramic sector
Vote: 102/110

High School Diploma in Mechanics, Mechatronics and Energy
"Luigi Bucci" Industrial Technical Institute [17/09/2012 – 09/06/2017]

City: Faenza (RA)
Country: Italy

LANGUAGE SKILLS

Mother tongue(s): **Italian**

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Autodesk AutoCAD (Optimal Knowledge) / CAD (Solid Edge, Solid Works) / Microsoft Office: proficient user of Word, Excel and Powerpoint / Ability to work with several operating systems including Windows and Mac OSX

CONFERENCES AND SEMINARS

NINE2023, 5th International Conference on Nanotechnology Based Innovative Applications for the Environment

[Venice, Italy, 25/06/2023 – 28/06/2023]

Simona Ortelli; [Maurizio Vespignani](#); Ilaria Zanoni; Magda Blosi; Claudia Vineis; Andreana Piancastelli; Giovanni Baldi; Valentina Dami; Stefania Albonetti; Anna Luisa Costa. Design of TiO₂-Surfactin Hybrid Systems with Multifunctional Properties. *Molecules* **2023**, 28, 1863 (Oral presentation).

Link: <https://www.aidic.it/nine2023/>

ORGANISATIONAL SKILLS

Organisational skills

- Excellent competence in time management and excellent skills in the management and organization of work acquired during the various curricular internships and during the study courses attended
- Excellent ability to work within a team
- Excellent ability to adapt and carry out the assigned work.

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

- Good communication skills
- Excellent skills in relating to people
- Ability to understand and solve problems
- Ability to help people and motivate them if in difficulty

PROFESSIONAL SKILLS

Professional skills

- Good command of mechanical knowledge, technical drawing and mechanical process technologies
- Good command of electronic and mechatronic knowledge
- Good command of basic and advanced chemical knowledge, with particular reference to the chemistry of materials
- Good command of Social Networks and Websites management
- Good command of chemical-physical-mechanical analyzes and characterizations of metallic, ceramic and polymeric materials

PUBLICATIONS

2023

1. Simona Ortelli; Maurizio Vespignani; Ilaria Zanoni; Magda Blosi; Claudia Vineis; Andreana Piancastelli; Giovanni Baldi; Valentina Dami; Stefania Albonetti; Anna Luisa Costa. Design of TiO₂-Surfactin Hybrid Systems with Multifunctional Properties. *Molecules* **2023**, 28, 1863 .

Link: <https://www.mdpi.com/1420-3049/28/4/1863>

PH.D SCHOOLS

Aldo Armigliato SEM School in Materials Science

[11/12/2023 – 14/12/2023]

- Imaging with Secondary Electrons
- Imaging with Backscattered Electrons
- Operation of the SEM, gun and beam adjustment
- Acquisition of EDX spectrum, compositional profiling and mapping
- Transmission imaging of thin samples in the SEM
- Basic sample preparation
- Introduction to image optimization
- Introduction to EDX spectrum analysis

Link: <https://www.sism.it/Details/196>

PERSONAL DATA TREATMENT

Personal data treatment

I authorize the processing of personal data contained in my curriculum vitae on the basis of art. 13 of Legislative Decree 196/2003 and art. 13 of EU Regulation 2016/679 concerning the protection of individuals with regard to the processing of personal data.

Vespignani Maurizio

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