



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE: 6347

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Department of Chemistry** Scientist in - charge: **Daniela Meroni**

**Imen Fellah**

### **CURRICULUM VITAE**

#### **PERSONAL INFORMATION**

<b>Surname</b>	<b>FELLAH</b>
<b>Name</b>	<b>Imen</b>

#### **EDUCATION AND TRAINING**

<b>Degree</b>	<b>Course of studies</b>	<b>University</b>	<b>year of achievement of the degree</b>
<b>Master</b>	<b>Water and environment</b>	<b>University of Gabes Tunisia</b>	<b>2017</b>
<b>PhD</b>	<b>Water and environment</b>	<b>University of Gabes Tunisia</b>	<b>2024</b>

#### **FOREIGN LANGUAGES**

<b>Languages</b>	<b>level of knowledge</b>
<b>English</b>	<b>B2</b>
<b>Italien</b>	<b>A2</b>
<b>French</b>	<b>B2</b>

#### **AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS**

<b>Year</b>	<b>Description of award</b>
<b>09/2020-12/2020</b>	<b>Research fellowship - European Institute of Membranes, IEM, UMR 5635, university of Montpellier, ENSCM, CNRS, 34730 Montpellier, (France)</b>
<b>09/2021-03/2022</b>	<b>Research fellowship - University of Milano, Department of Chemistry, Via Golgi 19, 20133 Milano (Italy)</b>



### TRAINING OR RESEARCH ACTIVITY

- Synthesis and characterization of nanostructured functional materials.
- Physical and surface characterization was carried out via different spectrophotometric technologies: BET, FTIR, HRTEM, SEM, XRD, XPS
- Photodégradation of emerging organic pollutants (EOP)
- Testing of water purification performance

In my PhD thesis, the enhancement of the ability of  $\text{BiPO}_4$  was carried out via the hybridization with two clays (smectite and montmorillonite) to enhance its adsorption capacity and photoactivity under UV and solar light towards the oxidation of diclofenac sodium, which is used worldwide as a nonsteroidal anti-inflammatory drug, leading to notable water pollution. To further improve the performance of  $\text{BiPO}_4$ - clay based photocatalysts, hexadecyl trimethyl ammonium bromide (HDTMA) was used to modify the clay before the coating of  $\text{BiPO}_4$ . The role of HDTMA in enhancing the adsorption and photocatalytic abilities was investigated. Finally, the optimization of  $\text{BiPO}_4$  amount coated on the surface HDTMA modified smectite was studied to figure out the ratio of  $\text{BiPO}_4$  towards the adsorption and photoactivity.

### CONGRESSES AND SEMINARS

Date	Title	Place
24-26 June 2022	5 <sup>th</sup> Conference International on Intelligent Materials and Spectroscopy,	Monastir, (Tunisia)
20-22 June 2022	1 <sup>st</sup> international conference Materials on Environment, Energy and Bioresource Application, TROIS RIVIERE.	Qubec (Canada)
18-19 December 2020	Sustainable Energy and Green Processes (SEGP 2020) seminar	Gabes, (Tunisia)
19-21 March 2018	6 <sup>th</sup> international water forum conference IWFC	Hammamet, (Tunisia)



## PUBLICATIONS

Articles in reviews
<b>I. Fellah , R. Djellabi , H. Ben Amor , N. Abderrahim , C. L. Bianchi , A. Giordana , G. Cerrato , A. Di Michele, Visible reactive light heterostructure HTDMA-BiPO<sub>4</sub> clays modified for sodium oxidation Diclofenac effective: Role of interface interactions and basal spacing, Journal of Water Process Engineering, 2022</b>
<b>I.Fellah, R. Djellabi, H. Ben Amor, N. Hamdi, M. Frias Ordonez,C. L. Bianch,Enhanced Photocatalytic Kinetics Using HDTMA Coated TiO<sub>2</sub>-Smectite Composite for the Oxidation of Diclofenac under Solar Light, Journal of Catalysts,2023.</b>
<b>N.Abderrahim, R.Djellabi, HB. Amor, I.Fellah, A. Giordana, G. Cerrato, A. Di Michele,CL.Bianchi, Sustainable purification of Cr(VI)-contaminated phosphoric acid by Ag/Ag<sub>3</sub>PO<sub>4</sub> coated activated carbon/montmorillonite under UV and solar light: material design and photocatalytic mechanism, Journal of Environmental Chemical Engineering, 2022</b>
<b>A.N.Saber,R.Djellabi,I.Fellah,N.Abderrahim,C.L.Bianchi,Synergistic resorption/photoFenton removal of typical polycyclic aromatic hydrocarbons replaced and progenitors by coking wastewater over cuo-Montmorillonite, Journal of Water Engineering Process, 2021</b>

## OTHER INFORMATION

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Place and date: 05/02/2024