

Youven BENSEGHIR - PhD student (3rd year)

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Research activity:

« Synthesis of hybrid composite photosystems POM@MOFs: structural characterization and development of thin films for water oxidation and proton reduction. »

Summary:

I am currently working on incorporating molecular catalyst, mainly polyoxometalates, in metal-organic frameworks for CO₂ photoreduction. The aim is to develop new and efficient heterogeneous systems.

Publications:

Structure-directing role of immobilized polyoxometalates in the synthesis of porphyrinic Zr-based metal-organic frameworks

Mathis Duguet, Alex Lemarchand, [Youven Benseghir](#), Pierre Mialane, Maria Gomez-Mingot, Catherine Roch-Marchal, Mohamed Haouas, Marc Fontecave, Caroline Mellot-Draznieks, Capucine Sassoie and Anne Dolbecq, *Chem. Commun.* **2020**, 56, 10143-10146

Co-immobilization of a Rh Catalyst and a Keggin Polyoxometalate in the UiO-67 Zr-Based Metal-Organic Framework: In Depth Structural Characterization and Photocatalytic Properties for CO₂ Reduction

[Youven Benseghir](#), Alex Lemarchand, Mathis Duguet, Pierre Mialane, Maria Gomez-Mingot, Catherine Roch-Marchal, Thomas Pino, Minh-Huong Ha-Thi, Mohamed Haouas, Marc Fontecave, Anne Dolbecq, Capucine Sassoie and Caroline Mellot-Draznieks, *J. Am. Chem. Soc.* **2020**, 142, 20, 9428-9438

Thin Films of Fully Noble Metal-Free POM@MOF for Photocatalytic Water Oxidation

Grégoire Paille, Maria Gomez-Mingot, Catherine Roch-Marchal, Mohamed Haouas, [Youven Benseghir](#), Thomas Pino, Minh-Huong Ha-Thi, Gautier Landrot, Pierre Mialane, Marc Fontecave, Anne Dolbecq and Caroline Mellot-Draznieks, *ACS Appl Mater. Interfaces* **2019**, 11, 51, 47837-47845

Education:

2018 - Current: Molecular chemistry Program, Université Pierre et Marie Curie, Paris, France

2018 : Master in Chemistry, major in Material Chemistry, Université Paris Saclay (Paris Sud), Orsay, France

2016: Bachelor in Chemistry, Bachelor in Biology, Université de Versailles Saint-Quentin-en-Yvelines Versailles, France

Previous Research activities:

2018: Institut de Chimie Moléculaire et des Matériaux d'Orsay, Université Paris-Sud : Coordination polymers nanoparticles for nanomedicine applications.

2017: Institut Lavoisier de Versailles, Université de Versailles : Synthesis and characterization of POM@MOFs for catalysis.

2016: Institut Lavoisier de Versailles, Université de Versailles :
Synthesis and characterization of luminescent MOFs.