**Anne DOLBECQ** **Senior scientist (DR1 CNRS)**

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## Diplomas

2003: **Accreditation to supervise research** (HDR) University of Versailles Saint Quentin.
1995: **PhD in Inorganic Chemistry**, University Paris Sud Orsay, France.
1992: Agrégation de Physique, option Chimie
Former student of the Ecole Normale Supérieure, Paris (1988-1992)

## Awards

2000: CNRS bronze medal

## Research Experience

Since 2009**: Senior scientist, DR CNRS**, Institut Lavoisier de Versailles, MIM team.

Research topics:
Multifunctional molecular polyoxometalates and polyoxometalates and Metal-Organic Frameworks-based materials with biological, optical or photocatalytic properties.

1997 – 2009: **Junior scientist, CR CNRS (section 14)**, Institut Lavoisier de Versailles.

1996 – 1997: **Teaching and research assistant position (ATER)** in the group of Prof. M. Verdaguer, Laboratoire de Chimie des Métaux de Transition, Université Paris VI.
Research topic: Synthesis of Co-Fe Prussian blue analogues.

1995 – 1996: **Post-doctoral researcher** in the group of Prof. A. M. Stacy at the University of California at Berkeley, USA (Lavoisier fellowship).
Research topic: Molten salt synthesis, structural and magnetic characterization of new cobalt and rhodium oxides.

1992 – 1995: **Doctoral researcher** (supervision P. Batail)**,** Université Paris-Sud Orsay.
Research topic*:* Organic-inorganic constructions based on functionalized radical salts.

## Main Administrative and Collective Responsibilities

Since 2026: Co-director of the MIM team (with Nathalie Steunou)
2015 - 2025: Deputy Director of Institut Lavoisier de Versailles
Since 2022: Member of the steering committee of DIM MaTerRe
2019 - 2023: Member of the Conseil Scientifique, Institut de Chimie CNRS (CSI INC)
2008 – 2012: Member of the Comité National du CNRS, section 14

## Main fundings (as coordinator)

**ANR-21-CE50-PMCOCAT**, 2022-2025, "POM@MOFs composites for photocatalytic $CO_2$ reduction", PhD grant and operating cost

**LABEX CHARMMMAT**, 2022-2023, "Introducing light harvesting dyads in MOFs for high photocatalytic $CO_2$ reduction activity", 1 year post-doctoral grant and operating cost

**LABEX CHARMMMAT**, 2020, "Zirconium/(métallo)porphyrin porous networks incorporating polyoxometalates for the photodegradation of organic pollutants", 1 year post-doctoral grant and operating cost

**LABEX CHARMMMAT**, 2013-2016, "Incorporation of POMs into MOF-type hybrid materials for applications in magnetism and electrocatalysis", PhD grant and operating cost

**ANR-11-BS07-011-01-BIOOPOM**, 2012-2014, "Polyoxometalates with Biological or Optical Properties" PhD grant and operating cost.

## Publications

**152 publications (7 review articles), 1 patent**

h-index: 54, ~ 10 000 citations (excluding self-citations)

### 5 selected recent publications:

Gold nanoparticles–polyoxometalates composites: a comprehensive overview from synthesis and characterization to applications, I. Christodoulou, A. Vallée, L. Blayac, B. Malemo, M. Jeleff, S. Boujday, P. Mialane, A. Dolbecq, *Coord. Chem. Rev*. **2026**, *548*, 217226.

Boosting Effect of Encapsulated Polyoxometalates in the Photocatalytic CO2 Reduction by MOF-545. K. Talbi, A. Robinson, A. Sole-Daura, H. CHen, Y. Benseghir, S. Kumar, Z. Halime, F. Ben Romdhane, M. Gomez-Mingot, P. Mialane, C. Mellot-Draznieks, A. Dolbecq, *Applied Catal B Env.* **2025**, *378*, 125644.

Zr-based MOF-545 Metal-Organic Framework Loaded with Highly Dispersed Small Size Ni Nanoparticles for $CO_2$ Methanation. H. Chen, J.-B. Burbach, H. N. Tran, A. Robinson, F. Ben Romdhane, M. Frégnaux, F. Penas-Hidalgo, A. Solé-Daura, P. Mialane, M. Fontecave, A. Dolbecq, C. Mellot-Draznieks, *ACS Applied Mat. Interf*. **2024**, *16*, 12509.

Heterogenisation of coordination complexes or polyoxometalates in Metal-Organic Frameworks : from Synthesis to Characterisations and applications in catalysis. P. Mialane, C. Mellot-Draznieks, P. Gairola, M. Duguet, Y. Benseghir, O. Oms A. Dolbecq, *Chem. Soc. Rev*. **2021**, *50*, 6152.

A Fully Noble-Metal-Free Photosystem Based on Cobalt-Polyoxometalates Immobilized in a Porphyrinic Metal-Organic Framework for Water Oxidation, G. Paille, M. Gomez-Mingot, C. Roch-Marchal, B. Lassalle-Kaiser, P. Mialane, M. Fontecave, C. Mellot-Draznieks, A. Dolbecq, *J. Am. Chem. Soc*. **2018**, *140*, 3613.