



POM BASICS 2022

POM-BASICS : Summer School in “Polyoxometalates Chemistry for Fundamentals and Applications”

La Rochelle-France, June 13-15th 2022

Polyoxometalates (POMs) are a large class of metal-oxo molecular clusters that bridges the nanoscopic world with an unmatched range of physical and chemical properties. Use of Polyoxometalate-based materials is found in many domains of science in relationship with the hot societal topics such as energy storage and conversion, electronics, biomass valorization, drugs and medicine.

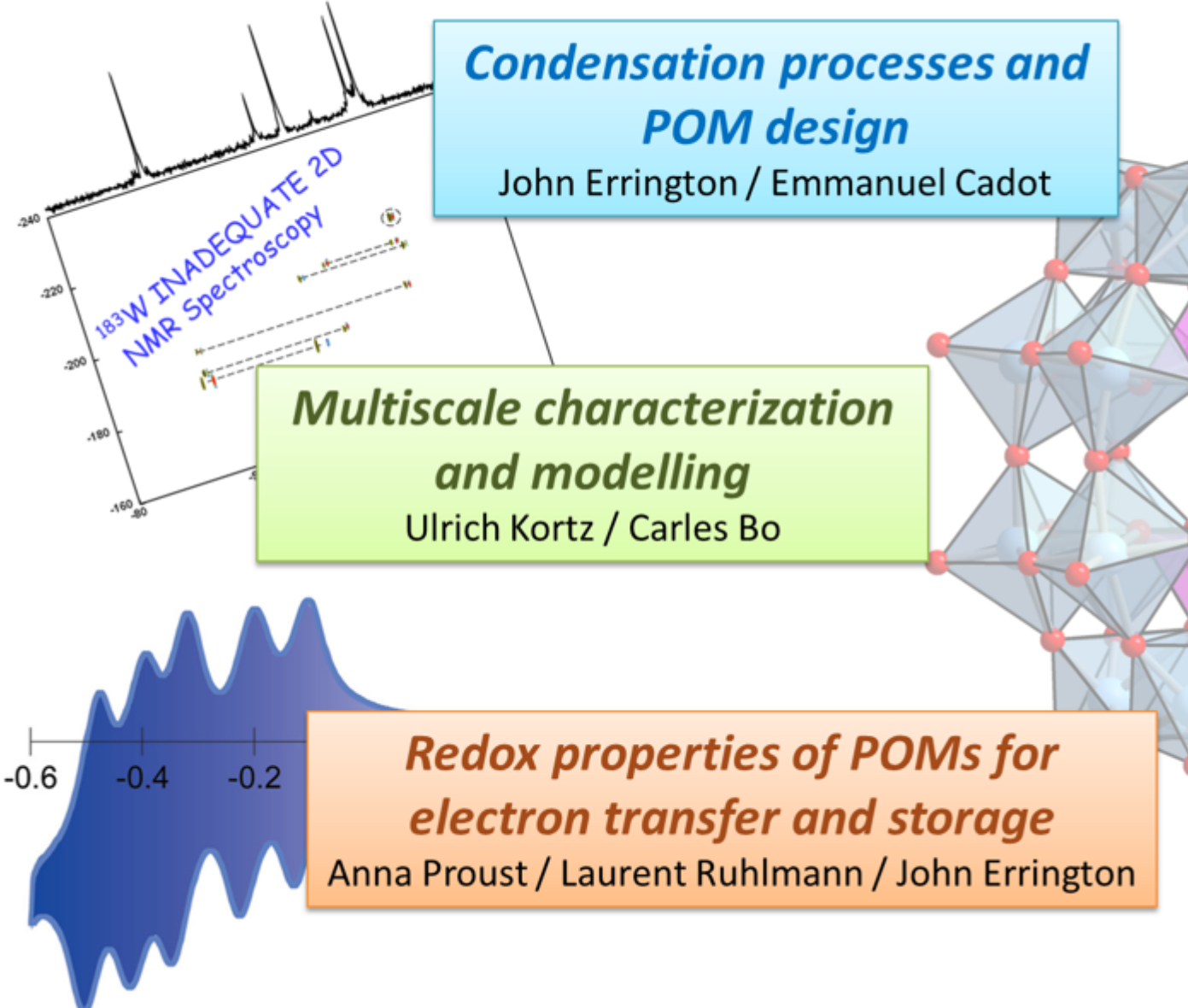
POM-BASICS summer school is addressed to PhD students, Post-docs, junior and senior researchers, engineers, technical staff and technologists, from academic structures as well as private companies, already working or interested to use or manipulate polyoxometalates in their future research as well as fundamental or applied.

Courses, tutorials, practical cases and posters session will be organized to cover the

broad scientific panel of the participants (i.e. POM@MOFs, electrons storage or hydrogen production, multi-scale characterization, experimental set-up and experimental data interpretation...).

Scientific animation of the sessions will be provided by academic scientists from European Countries (France, UK, Germany, Belgium, Spain, Israel, Italy...), each of them recognized for their world-leading role in Polyoxometalates Chemistry.

6 interdisciplinary sessions



Condensation processes and POM design

John Errington / Emmanuel Cadot

Multiscale characterization and modelling

Ulrich Kortz / Carles Bo

Redox properties of POMs for electron transfer and storage

Anna Proust / Laurent Ruhlmann / John Errington

Definitive timetable

Courses synopsis

Session 1: Condensation processes and POM design

Directed polycondensation processes and self-assembly engineering of POMs (Prof. E. CADOT)

Session 2: Redox properties of POMs

Fundamentals aspects of POMs reduction and properties of reduced POMs (Prof. A. PROUST)

Polyoxometalate-based electron transfer modulation for efficient electrocatalytic applications (Prof. L. RUHLMANN)

Approaches to rational chemical reduction of POMs (Prof. J. ERRINGTON)

Session 3: Multiscale structural characterization techniques and modelling in POM chemistry

Structural characterization in the solid state and in solution: opportunities and pitfalls (Prof. U. KORTZ)

Multiscale structural characterization techniques and modelling in POM chemistry (Prof. C. BO)

Session 4: POMs in catalysis

Catalysis for the activation of small molecules (Prof. A. SARTOREL)

Session 5: Functional POM assemblies and processing

Heterogenisation of POMs in MOFs : from synthesis to characterization and applications in catalysis (Prof. P. MIALANE)

POMs as ligands for metal and metaloxide nanoparticles (Prof. I. WEINSTOCK)

Session 6: POMs and the biological world

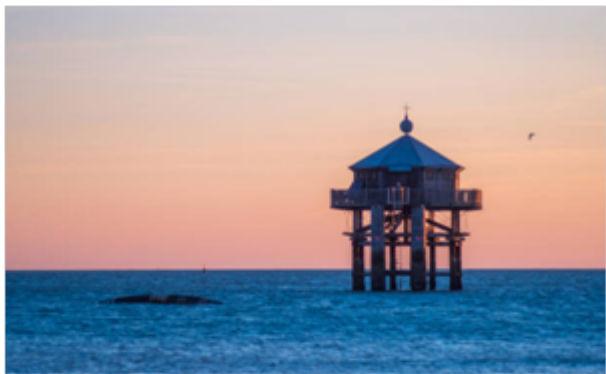
Part 1: POM biological activity (antiviral, -tumoral, -bacterial) and metalloenzyme mimics (Prof. T. PARAC-VOGT)

Part 2: POM biological activity (antiviral, -tumoral, -bacterial) and metalloenzyme mimics (Prof. U. KORTZ)

Organising committee

Anna PROUST ; Emmanuel CADOT ; Nathalie LECLERC; Christel VENTURINI ;
Patricia AUBERT

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Scientific Committee

Prof. Anna PROUST (Sorbonne Université, FRANCE)

Prof. Emmanuel CADOT (Université de Versailles Saint-Quentin-en-Yvelines, FRANCE)

Prof. Pierre MIALANE (Université de Versailles Saint-Quentin-en-Yvelines, FRANCE)

Prof. Laurent RUHLMANN (Université de Strasbourg, FRANCE)

Prof. Carles BO ((CIQ, Tarragona, SPAIN)

Prof. Lee CRONIN (University of Glasgow, School of chemistry, UK)

Prof. Ulrich KORTZ (Jacobs University, Dpt of Chemistry, Bremen, GERMANY)

Prof. Ronny NEUMANN (Weizmann Institute of Science, Rehovot, ISRAEL)

Prof. Ira WEINSTOCK (Ben-Gurion University of the Negev, ISRAEL)

Prof. Tatjana Paract-VOCGT (KU-Leuven, Dpt of Chemistry, Leuven, BELGIUM)

Prof. Carsten STREB (Institute of Inorganic Chemistry, Ulm University, GERMANY)

Covid information

Coming to France?

Your Covid-19 questions answered [HERE](#)

Accommodation

The POM-BASICS summer school will be organized at the Residence-Club La Fayette in La Rochelle (FRANCE). In La Rochelle, the ocean energizes you with its invigorating air and invites you to learn more about POMs chemistry!





Coming to La Rochelle

La Rochelle is located on the west coast of France. From abroad, it can be accessed by train from Bordeaux, Nantes or Paris airports.

1. From Paris airports (Charles de Gaulle or Orly).

Go to Gare Montparnasse either by taxi or with RER B and then the metro.

There are several direct trains from Gare Montparnasse to La Rochelle Ville (duration between 2h39 to 3h06).

2. From Nantes airport

Go to Nantes Station by the airport Shuttle bus (20 min) (<https://www.nantes.aeroport.fr/en/transport-access/shuttle-bus-toward-city>)

There are several direct trains Intercités (1h44) or TER (2h05) from Nantes train station to La Rochelle Ville.

3. From Bordeaux airport

Go to Bordeaux Saint Jean Station by the 30'Direct shuttle (30 min) (<https://30direct.com/>).

There are several direct trains Intercités (2h20) or TER (2h36) from Bordeaux to La Rochelle Ville.

Important dates

Pre-registration is now closed.

Registration: *If you are selected to attend the POM school, you must finalize the registration on [azur colloque \(link here\)](#) and then proceed to the payment of the registration fees.*

Opening: April 25th 2022

Deadline: May 22nd 2022

Registration fees

Registration fees include accomodation (from 12th (evening) to 16th morning (4 nights) ; Club La Fayette), breakfast, lunch, dinner, coffee breaks, congress kit, certificate of attendance.

For CNRS agents : the participation is free (registration fees covered by the CNRS)

For PhD students : 160 €

For Academics (permanent and post-doc researchers) : 320 €

For Industrials : 450 €

Book of abstracts and Courses

[Click here to download the book of abstracts.](#)

[Click here to download the courses \(password required\)](#)

Team work

[Click here to download the articles](#)

Abstract

- **POSTERS:** we will organise a poster session. So if you are interested in presenting your results, we ask you to submit an abstract (**to download the template, click here**). The deadline is May 8th, send your abstract to the following e-mail address: sciences-irnpom@listes.sorbonne-universite.fr. We will try to accept as many posters as possible but depending on the room available.

- **SPOTLIGHTS:** among the poster list, we will select 4 to 6 topics related to our training sessions, if possible around global challenges, and we will give the opportunity to the author to present a spotlight on it: a general context/perspective, which challenges, what POMs could bring and the author's own contribution. We will make the selection around May 10th, this will let enough time to prepare the spotlight, duration 10mn + 5 minute questions/discussion

- **TEAM WORK:** the week before the school we will propose you to choose a scientific article from a list provided by the trainers. According to your individual choices, we will constitute groups of people that will work on a given paper during a dedicated session, to prepare a short (5mn) presentation of the paper that will be given on the following day: which context, what significance...