



The Department of Colloid Chemistry (Director Prof. Dr. Markus Antonietti) at the Max Planck Institute of Colloids and Interfaces in Potsdam, Germany invites applications from outstanding young scientists for the position of

### **Postdoctoral Position (m/f/d)**

We are looking for a highly motivated Postdoctoral Researcher in the field of materials science and chemistry with major interests in materials synthesis and photocatalysis. The candidate should have a Ph.D. in Chemistry, Chemical Engineering, Materials or closely related fields, with an outstanding profile, a strong background and interests in

- Photocatalysis
- Chemical Vapor Deposition
- Materials chemistry
- Flow chemistry

The position will be under the European Union's HORIZON-EIC-2021-PATHFINDEROPEN-01 program in the groups of Dr. Savatieiev and Dr. Giusto.

#### **Project description**

Mimicking the chemical production of nature is a well pursued dream in the scientific community. Scientific progress is limited by the lack of efficient synergies among complex functions and by a much smaller research library than nature.

CATART will explore new synergies in reaction robots that mimic nature in a much faster way. This will be achieved using H<sub>2</sub>O and CO<sub>2</sub> as model substrates. We propose systems containing 3-D quantum dot networks with the ability to simultaneously harvest sun-light by luminescence, photocatalyze substrates and separate products. These phenomena will be managed by artificial intelligence, leading to reaction robots that autonomously learn and instantly maximize productivity. The envisioned system will revolutionize the way chemicals are produced.

The combination of expertise in photonics, machine learning, catalysis, organic chemistry and engineering from 5 academic, 1 research center, 1 SME and 1 industrial partner will enable a successful pathway into feasible reaction robots. CATART will contribute to a game-changing chemical technology, placing EU industry and society in a privileged situation to face future economic and environmental constraints.

**The position is available starting from 1<sup>st</sup> of November 2022.**



**MAX PLANCK INSTITUTE**  
OF COLLOIDS  
AND INTERFACES



To submit your candidature please send an email to: [oleksandr.savatieiev@mpikg.mpg.de](mailto:oleksandr.savatieiev@mpikg.mpg.de) and [paolo.giusto@mpikg.mpg.de](mailto:paolo.giusto@mpikg.mpg.de), with subject [Postdoc – CATART] – [Name, Surname], with attached PDF version of your CV and a short cover letter.

Please send us your application in English until **31<sup>st</sup> of October 2022**.

The candidate CV will be evaluated internally according to the project and the best candidates will be invited for an online interview. After the online interview the interviewed candidates will receive an email with the final decision.

The accepted candidate will join the Max Planck Institute of Colloids and Interfaces, Colloid Chemistry Department, joining the groups led by Dr. Oleksandr Savatieiev and Dr. Paolo Giusto.

The Max Planck Society strives for gender equality and diversity. We welcome applications from all backgrounds. The Max-Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Furthermore, the Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

For further information about the Institute see <https://www.mpikg.mpg.de/> .