Postdoctoral position | Theory and simulation to advance the metal halide perovskite technology

Contract	Fully funded 2-year position (extension possible)
Starting date	September 2024
Gross monthly salary	Between 2 990 and 4 166 € (depending on past experience)
Institution	Institut des Sciences Chimiques de Rennes (ISCR)
Contact	Dr. Claudine KATAN

A full-time 2-year postdoctoral position is available in the Theoretical Inorganic Chemistry team at the Institut des Sciences Chimiques de Rennes (ISCR, France) under the supervision of Prof. Claudine Katan for a talented and ambitious researcher.

The postdoctoral fellow will be involved in work dedicated to rationalize the physical properties of new metal halide perovskites and related compounds that will foster optimization of perovskite materials and devices not only for energy applications but also for transferring and processing information with the lowest energy budget. This implies a close collaboration between CNRS and partners developing the perovskite materials and device architecture, including major actors in the field [1]. The postdoctoral fellow will benefit from the expertise developed in Rennes on metal halide perovskites for more than a decade by physicists and chemists from ISCR and Institut FOTON [1,2]. Local, national as well as European computing means will be made available for the purpose of the project.

Profile of the candidate | A PhD Degree in Physics is required. We are looking for a candidate with a strong background in solid state physics as well as in quantum theories, in particular DFT and its extensions applied to solids. Aptitudes and taste for analytical developments will be appreciated. Complementary skills in material science, such as mastering NMR and NQR spectroscopies and/or Mueller matrices and related properties shall be beneficial to the progress of the work. Simulation code development and/or expertise using Python or MATLAB are desirable. The candidate shall be able to demonstrate his/her expertise in the above-mentioned fields through publications in high quality, peer reviewed journals. Excellent command of English, both spoken and written, is mandatory for efficient interaction with preexisting collaborators from other countries. Autonomy and communication skills are also expected to participate in our project and benefit from the existing rewarding working atmosphere.

How to apply | Candidates should apply via the CNRS plateforme (reference UMR6226-CLAKAT-006) and join to their application an up-to-date detailed CV, including a list of publications and communications, a motivation letter, as well as contact information of two scientists for possible request of recommendation letters. **Applications sent by e-mail will be considered ineligible**. The selection will start immediately and will continue until the position is filled.

[1] A. D. Mohite *et al.*, *Science* **2024**, in press; A. Abhervé *et al.*, *Adv. Mater.* **2023**, *35*, 2305784 ⚜**HAL**; F. Deschler *et al.*, *Sci. Adv.* **2023**, *9*, eadh5083 ⚜**HAL**; M. Kovalenko *et al.*, *Science* **2022**, *377*, 1406 ⚜**HAL**.
[2] C. Katan *et al.*, *Chem. Rev.* **2019**, *119*, 3140 ⚜**HAL**; C. Quarti *et al.*, *Adv. Optical Mater.* **2024**, *12*, 2202801 ⚜**HAL** and *Helv. Chim. Acta* **2021**, *104*, e2000231 ⚜**HAL**; J. Even *et al.*, *Science* **2022**, *377*, 1425 ⚜**HAL**.