

Research Grants for PhD students from the China Scholarship Council

Information Form (please read the guidelines carefully on the website www-csc.utt.fr)

Supervisor's name : CALVEZ Given names : Guillaume

Status (prof., assistant prof., ...) : assistant prof.

Laboratory : Institut Sciences Chimiques Rennes – UMR CNRS 6226 Website address : <https://iscr.univ-rennes1.fr>

Institution : Institut National des Sciences Appliquées de Rennes Website address : <https://www.insa-rennes.fr>

Scientific competence of the supervisor:

coordination chemistry of lanthanides – luminescence

Two major publications in the field proposed for the PhD :

1. H. Yao et al., Inorg. Chem., 2019, 58, 16180-16193
2. G. Calvez et al., Coord. Chem. Rev., 2017, 340, 134-153

Website address of the personal page : <https://iscr-csm.insa-rennes.fr/guillaumecalvez/>

Supervisor's email : Guillaume.Calvez@insa-rennes.fr

Description of the research work proposed for a PhD

Topic # (see list) : IV-5

Title : New coordination compounds based on hexanuclear 4f precursors

Subject :

The goal of this research work would be to synthesize and characterize new coordination compounds using hexanuclear precursors as secondary building units. The precursors are now well known and their synthesis is mastered by the group, but their use as precursors for further synthesis must be developed. The characterizations of the new compounds are multiple, their thermal and chemical stability and their photo-physical properties in particular should be studied.

Keywords :

lanthanide coordination chemistry, polynuclear complexes, luminescence

Expected collaborations :

The other member of the group of course for magnetic, structural, time-resolved luminescence studies for example but also the rest of the chemistry lab in Rennes for NMR or EXAFS studies for example. Any other collaboration that would offer a better insight in the sometimes tough to characterized objects will be welcome.

Background required from the applicant :

Basics of chemistry techniques but also basic knowledge on previously cited characterization techniques would be welcome, together with a willing to learn english and french quickly.

Existence of a PDF file detailing the proposal ("yes" or "no") : no

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