

We invite FAU students for an opportunity to carry out a Master's and Bachelor's thesis project on the new and exciting topic of **Stimuli-Responsive Lead-Free Halide Perovskite Materials for Light Conversion**.

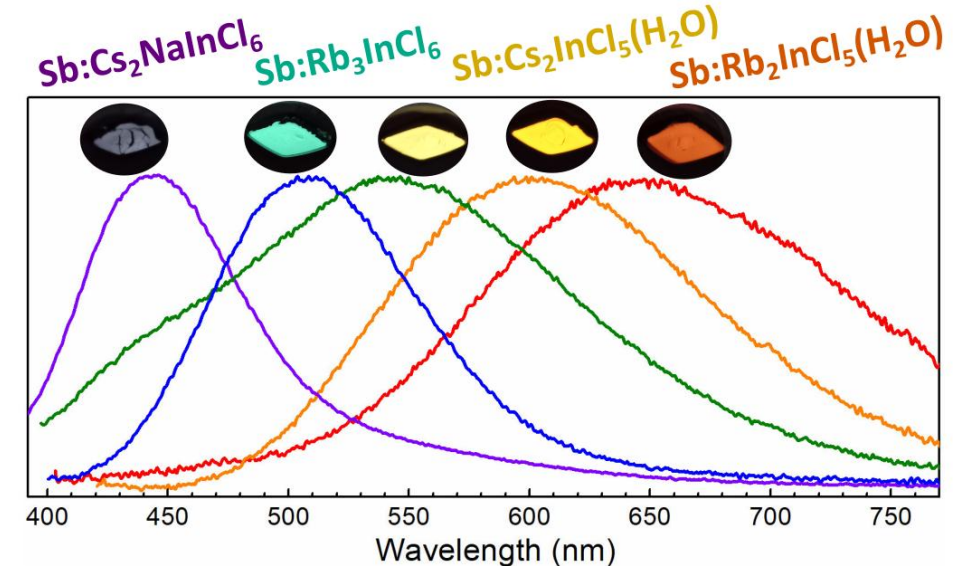
The MSc/BSc project will be carried out in collaboration between **The Chair of Glass and Ceramics (Prof. Dominique de Ligny)**, **Institute of Materials for Electronics and Energy i- MEET (Prof. Christoph J. Brabec)**, **Helmholtz Institute for Renewable Energies HI ERN (Dr. Oleksandr Stroyuk)**.

The project has a distinctly **interdisciplinary character** and focuses on

- **Sustainable antimony-doped metal-halide perovskite materials as novel phosphor materials for light management;**
- **Evolution of structure and photoluminescence of such materials under external stimuli (temperature, pressure/strain, illumination, humidity);**
- **Relationships between the structure and elastic properties of the phosphors and spectral parameters of their emission;**

### Qualifications:

- Knowledge of chemistry and chemical lab operation
- Basic knowledge of methods of structural (powder XRD) and spectral characterization (UV-Vis, PL, Raman spectroscopy)
- Ambition of exploring in a multi-disciplinary area



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**Relevant publications:** (i) O. Stroyuk et al., *Angew. Chem. Int. Ed.* 2023, **62**, e202212668T.  
(ii) O. Stroyuk, et al., *J. Mater. Chem. C*, 2023, **11**, 4328; 2024, **12**, 8705; 2025, **13**, 2303  
(iii) O. Stroyuk, et al., *Materials Advances*, 2022, **3**, 7894; 2025, **6**, 4847