

Opening: Postdoctoral researcher

with experimental research experience in thin films, optoelectronics, physical vapor deposition (PVD), contact materials for solar cells or similar optoelectronic devices.

Position Summary:

The M³ Lab (<https://www.utwente.nl/en/tnw/ims/research/research-morales/>) part of the Inorganic Materials Science Chair of the University of Twente has an opening for an excellent postdoctoral researcher. The research is in the context of a recently funded CET Partnership project (<https://cetpartnership.eu>): ‘Easy to fabricate, both sides poly-Si passivating contact bottom cell for Perovskite/Silicon tandem devices (EPoBoC)’.

What You Will Do:

- Develop indium-free transparent conductive oxides (TCOs) as transparent electrodes or recombination junction for perovskite/silicon tandem devices
- Develop hole transport contact materials for perovskite solar cells by PVD
- Develop low damage PVD of contact materials by sputtering or pulsed laser deposition
- Perform material, interfaces and device characterization (e.g. XPS, UPS, XRD, optical spectroscopy, electrical characterization, photoluminescence, PLQY, EQE). Experience with in-situ experimentation is an asset
- Communicate and coordinate with the international project partners
- Write project reports and communicate results at progress meetings
- Write and publish papers, and present results at international conferences

What is Required:

- PhD in Materials Science, Physics, Chemistry or Electrical Engineering
- Experience with vacuum deposition equipment (experience with PVD is a plus)
- Experience in optoelectronic materials and solar cells or other optoelectronic devices
- Experience in programming (requirement: Python)
- Work with a multidisciplinary team and work collaboratively with academic team members
- Mentor graduate students
- Excellent writing and presentation skills

Application documents:

- Cover letter with a summary of previous research experience and motivation
- Curriculum vitae that includes the name of two references
- **Application deadline: November 1st**
- Please send the application documents to:
Prof. Monica Morales-Masis, m.moralesmasis@utwente.nl

The postdoctoral associate is expected to start in January 2024. The appointment is for 24 months and may be extended pending satisfactory performance and the availability of funds.