Contribution ID: **203** Contribution code: **O-41** Type: **Oral**

Impact of Growth Conditions on the $CH_3NH_3PbI_3$ Perovskite Solar Cells, Studied by Low-Energy μSR

Thursday, 1 September 2022 16:20 (20 minutes)

Metal halide perovskites (MHPs) have attracted great attention in recent years due to their enormous potential for application in optoelectronic devices. However, the defects at surface/interfaces and grain boundaries of perovskite films, which impede the further enhancement of power conversion efficiency (PCE) and long-term stability of halide perovskite solar cells (PSCs), still need to be fully understood. Here, we studied the impact of different growth conditions on the interface and grain boundaries of $CH_3NH_3PbI_3$ perovskite films by low-energy μSR. Our measurements show that low-energy μSR can become a powerful technique for studying the defect engineering of PSCs.

Primary author: NI, Xiaojie (Paul Scherrer Institute)

Co-authors: Dr LEI, Lei (University of Nottingham); MENDES MARTINS, Maria (Laboratory for Muon Spin Spectroscopy, Paul Scherrer Institute); Dr SUTER, Andreas (Paul Scherrer Institute); Dr SALMAN, Zaher (Paul Scherrer Institute); Dr PROKSCHA, Thomas (PSI)

Presenter: NI, Xiaojie (Paul Scherrer Institute)

Session Classification: Oral contributions

Track Classification: New techniques