2:45 PM - 3:15 PM

▲[5p-A405-3] PLD for the epitaxial growth of 2D transition metal dichalcogenide

Hiroyuki Nakamura¹ (1.MPI-FKF)

Keywords: WSe₂, monolayer, PLD

Transition metal dichalcogenides with MX₂ (M:Mo,W X:S,Se) composition have remarkable opto-electronic and spintronic properties, making scalable thin film growth both crucial and interesting. In this study, we synthesized WSe₂ thin films with monolayer up to several layers using pulsed laser deposition. By X-ray diffraction, Raman, and electron beam diffraction, the structure of WSe₂ films was evaluated. Based on these structural data, we discuss epitaxial relationship of the film/substrate interface as well as possible impact of substrate on the electronic/optical properties of WSe₂.