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**Heteroepitaxial growth and electronic structure of  $\text{LaVO}_3$  films on  $\text{SrTiO}_3$**  YASUSHI HOTTA, YASUSHIGE MUKUNOKI, TOMOFUMI SUSAKI, Department of Advanced Materials Science, University of Tokyo, HAROLD Y. HWANG, Department of Advanced Materials Science, University of Tokyo, Japan Science and Technology Agency — In perovskite transition metal oxides, a relatively small variation in lattice constants allows the study of heteroepitaxial growth for a wide range of materials combinations. Recently, perovskite oxides have been extensively studied to understand their growth dynamics on an atomic scale, and to investigate their physical properties. The growth behavior of films can strongly depend on the terminating layer of the substrate surface. In this study, we investigated the growth dynamics and physical properties of heteroepitaxial  $\text{LaVO}_3$  films grown on  $\text{SrTiO}_3$ . In particular, we found optimal growth conditions to obtain two-dimensional growth of atomically flat epitaxial  $\text{LaVO}_3$  films.

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