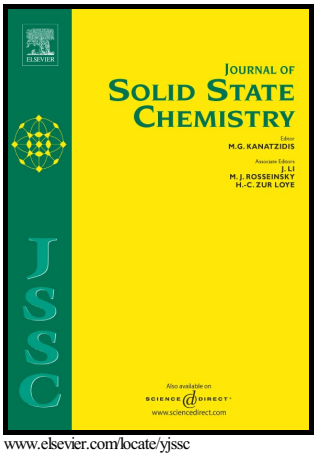

www.elsevier.com/locate/yjssc

Four two-dimensional ternary selenides based on group 13 and 14 metals: Syntheses, crystal structures, and electrochemical properties

Jingrui Wang, Peng Li, Ting Cai, Dan-Dan Yang, Wei-Wei Xiong

PII: S0022-4596(18)30158-0
DOI: https://doi.org/10.1016/j.jssc.2018.04.018
Reference: YJSSC20186

To appear in: *Journal of Solid State Chemistry*

Received date: 9 February 2018
Revised date: 12 April 2018
Accepted date: 14 April 2018

Cite this article as: Jingrui Wang, Peng Li, Ting Cai, Dan-Dan Yang and Wei-Wei Xiong, Four two-dimensional ternary selenides based on group 13 and 14 metals: Syntheses, crystal structures, and electrochemical properties, *Journal of Solid State Chemistry,* https://doi.org/10.1016/j.jssc.2018.04.018

Four two-dimensional ternary selenides based on group 13 and 14 metals: Syntheses, crystal structures, and electrochemical properties

Jingrui Wang, Peng Li, Ting Cai, Dan-Dan Yang, Wei-Wei Xiong*

Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Jiangsu National Synergetic Innovation Center for Advanced Materials (SICAM), Nanjing Tech University (NanjingTech), 30 South Puzhu Road, Nanjing 211816, P.R. China.

*Corresponding author. Wei-Wei Xiong. Key Laboratory of Flexible Electronics (KLOFE) & Institute of Advanced Materials (IAM), Jiangsu National Synergetic Innovation Center for Advanced Materials (SICAM), Nanjing Tech University (NanjingTech), 30 South Puzhu Road, Nanjing 211816, P.R. China.iamwwxiong@njtech.edu.cn

Abstract

A series of two-dimensional ternary selenides, $[NH_4]_2[Ga_2Sn_2Se_8]$ (**1**), $[NH_4]_2[In_2Ge_2Se_8]$ (**2**), $[NH_4]_2[In_2Sn_2Se_8]$ (**3**), $[NH_4]_2[Ga_2Ge_2Se_8]$ (**4**), have been solvothermally synthesized and characterized by single crystal X-ray diffraction, energy