Accepted Manuscript

Accepted Date:

Facile Scalable Synthesis of MoO₂ Nanoparticles by New Solvothermal Cracking Process and their Application to Hole Transporting Layer for CH₃NH₃PbI₃ Planar Perovskite Solar Cells

Hanseul Choi, Jin Hyuck Heo, Su Ha, Byeong Wan Kwon, Sung Pil Yoon, Jonghee Han, Woo-Sik Kim, Sang Hyuk Im, Jinsoo Kim

PII: DOI: Reference:	S1385-8947(16)31520-0 http://dx.doi.org/10.1016/j.cej.2016.10.110 CEJ 15966
To appear in:	Chemical Engineering Journal
Received Date:	19 August 2016
Revised Date:	12 October 2016

24 October 2016

Please cite this article as: H. Choi, J. Hyuck Heo, S. Ha, B. Wan Kwon, S. Pil Yoon, J. Han, W-S. Kim, S. Hyuk Im, J. Kim, Facile Scalable Synthesis of MoO₂ Nanoparticles by New Solvothermal Cracking Process and their Application to Hole Transporting Layer for CH₃NH₃PbI₃ Planar Perovskite Solar Cells, *Chemical Engineering Journal* (2016), doi: http://dx.doi.org/10.1016/j.cej.2016.10.110

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Facile Scalable Synthesis of MoO₂ Nanoparticles by New Solvothermal Cracking Process and their Application to Hole Transporting Layer for CH₃NH₃PbI₃ Planar Perovskite Solar Cells

Hanseul Choi¹⁺, Jin Hyuck Heo¹⁺, Su Ha²⁺, Byeong Wan Kwon³, Sung Pil Yoon³,

Jonghee Han³, Woo-Sik Kim¹, Sang Hyuk Im^{1*}, Jinsoo Kim^{1*}

¹Department of Chemical Engineering, Kyung Hee University,

1732 Deogyeong-daero, Giheung-gu, Yongin, Gyeonggi-do 17104, Republic of Korea

²Voiland School of Chemical Engineering and Bioengineering, Washington State University, P.O. Box 642710, Pullman, WA 99164-2710, USA

³Fuel Cell Research Center, Korea Institute of Science and Technology,

5, Hwarang-ro 14-gil, Seongbuk-gu, Seoul 02792, Republic of Korea

*Corresponding authors:

E-mail address: imromy@khu.ac.kr (S.H. Im), jkim21@khu.ac.kr (J. Kim)

⁺These authors (H. Choi, J. H. Heo, S. Ha) have contributed equally to this work.

Download English Version:

https://daneshyari.com/en/article/4763580

Download Persian Version:

https://daneshyari.com/article/4763580

Daneshyari.com