

NANO KOREA 2020

July 1~3, KINTEX, Korea

Min Jae KO

Professor, Hanyang University

Address: 222 Wagnsimni-ro, Seongdong-gu, Seoul 04763, Republic of Korea

Telephone: (+82)2-2220-0528

Fax: (+82)2-2220-3119

E-mail: mjko@hanyang.ac.kr

Nationality: Republic of Korea

Web: <http://aeml.hanyang.ac.kr>

EDUCATION

Seoul National University	Ph.D	Materials Science and Engineering	2001
Seoul National University	MS	Fiber and Polymer Science	1997
Seoul National University	BS	Fiber and Polymer Science	1995

PROFESSIONAL ACTIVITIES

- Professor, Dept. of Chemical Engineering, Hanyang University, Republic of Korea. (Feb. 2017 to Present)
- Principal Research Scientist, Photo-Electronic Hybrids Research Center, Korea Institute of Science and Technology (KIST), Republic of Korea. (Feb. 2008 to Jan. 2017)
- Senior Engineer, HD LCD Center, Samsung Electronics Co., Republic of Korea. (July 2005 to Feb. 2008)
- Postdoctoral Associate, Dept. of Chemical Engineering, Massachusetts Institute of Technology. (2001 to 2004)
- Guest Professor, North China Electric Power University, P. R. China. (Jan. 2016 to Present)
- Editor, *Current Applied Physics*, The Korea Photovoltaic Society (Jan. 2016 to Present)
- Associate Editor, *Nano Convergence*, Korea Nano Technology Research Society (Jan. 2016 to Present)
- Editorial Board Member, *Scientific Reports*, Nature Publishing Group (June 2015 to Present)

AWARD AND HONORS

- Research of the Month, Hanyang University (May 2018)
- GPVC Young Scientist Awards (March 2018)
- Award of Excellence for the “Scientists who will lead 100 key technologies of Korea in 2020” by the National Academy of Engineering of Korea (Dec. 2013)
- Young Scientist Award of 2012 by Korea Research Council of Fundamental Science and Technology (Dec. 2012)

MAIN SCIENTIFIC PUBLICATION

- S. Lee, P. H. Hong, J. Kim, K. Choi, G. Moon, J. Kang, S. Lee, J.B. Ahn, W. Eom, **M.J.**

NANO KOREA 2020

July 1~3, KINTEX, Korea

- Ko*, and S.W Hong*, “Highly self-healable polymeric blend synthesized using polymeric glue with outstanding mechanical properties”, *Macromolecules* **53**(6), 2279-2286 (2020).
- J. Kim, B. Koo, W.H. Kim, J. Choi, C. Choi, S.J. Lim, J.-S. Lee, D.-H. Kim, M.J. Ko* and Y. Kim*, “Alkali Acetate-Assisted Enhanced Electronic Coupling in CsPbI₃ Perovskite Quantum Dot Solids for Improved Photovoltaics” *Nano Energy* **66**, 104130 (2019).
 - M. Jo, S. Bae, I. Oh, J.-H. Jeong, B. Kang, S.J. Hwang, S.S. Lee, H.J. Son, B.-M. Moo, M.J. Ko* and P. Lee*, “3D Printer-Based Encapsulated Origami Electronics for Extreme System Stretchability and High Areal Coverage”, *ACS Nano* **13**, 12500-12510 (2019).
 - G.S. Han, J. Kim, S. Bae, S. Han, Y.J. Kim, O.Y. Gong, P. Lee, M.J. Ko*, H.S. Jung*, “Spin-Coating Process for 10 cm x 10 cm Perovskite Solar Modules Enabled by Self-Assembly of SnO₂ Nanocolloids”, *ACS Energy Lett*, **4**(8), 1845-1851 (2019).
 - H.S. Jung*, G.S. Han, N.-G. Park*, and M.J. Ko*, “Flexible Perovskite Solar Cells”, *Joule* **3**(8), 1850-1880 (2019).
 - J.S. Kang, J.-Y. Kim, J. Yoon, J. Kim, J. Yang, D.Y. Chung, M.-C. Kim, H. Jeong, Y.J. Son, B.G. Kim, J. Jeong, T. Hyeon, M. Choi*, M.J. Ko*, and Y.-E. Sung*, “Room-Temperature Vapor Deposition of Cobalt Nitride Nanofilms for Mesoscopic an Perovskite Solar Cells”, *Advanced Energy Materials* **8**, 17031114 (2018)
 - J.-Y. Kim, Y.J. Jang, J. Park, J. Kim, J.S. Kang, D.Y. Chung, Y.-E. Sung, C. Lee, J.S. Lee* and M.J. Ko*, “Highly loaded PbS/Mn-doped CdS quantum dots for dual application in solar-to-electrical and solar-to-chemical energy conversion”, *Applied Catalysis B: Environmental* **227**, 409-417 (2018).
 - Y.H. Park, I. Jeong, S. Bae, H.J. Son, P. Lee, J. Lee, C.-H. Lee*, and M.J. Ko*, “Inorganic Rubidium Cation as an Enhancer for Photovoltaic Performance and Moisture Stability of HC(NH₂)₂PbI₃ Perovskite Solar Cells”, *Advanced Functional Materials* **27**(16), 1605988 (2017)
 - I. Jeong, H. Jung, M. Park, J.S. Park, H.J. Son, J. Joo, J. Lee*, and M.J. Ko*, “A Tailored TiO₂ Electron Selective Layer for High-Performance Flexible Perovskite Solar Cells via low temperature UV process”, *Nano Energy* **28**, 380-389 (2016).
 - M. Park, J.-Y. Kim, H.J. Son, C.-H. Lee, S.S. Jang, M.J. Ko*, “Low-Temperature Solution-Processed Li-Doped SnO₂ as an Effective Electron Transporting Layer for High-Performance Flexible and Wearable Perovskite Solar Cells”, *Nano Energy*, **26**, 208-215 (2016).
 - B. Koo, H. Jung, M. Park, J.-Y. Kim, H.J. Son, and M.J. Ko*, “Pyrite-Based Bi-functional Layer for Long-term Stability and High Performance of Organo-Lead Halide Perovskite Solar Cells”, *Advanced Functional Materials*, **26**(30), 5400-5407 (2016).
 - Y. Li, S. Carretero-Palacios, K. Yoo, J.H. Kim, A.Solano, C.-H. Lee, H. Míguez*, and M.J. Ko*, “Maximized performance of dye solar cells on plastic: a combined theoretical and experimental optimization approach”, *Energy & Environmental Science*, **9**(6), 2061-2071 (2016).

RESEARCH INTERESTS

- Next Generation Photovoltaics (Perovskite, Sensitized and Quantum Dots)

NANO KOREA 2020

July 1~3, KINTEX, Korea

- Nanostructured Energy Harvesting Materials, Devices and Processes
- Flexible Electronics and Smart Nanomaterials