



Atomic Layer Deposition for Nanoscale Oxide Semiconductor Field Effect Transistors: Four Values and Outlook

Prof. Dr. Jin-Seong Park

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Jin-Seong Park has currently researched Atomic Layer Process (ALP) for new channel layers, extremely thin films (gate insulator, metal-interconnection), organic-inorganic layers, and area selective deposition (ASD) for 3D nanoscale device application. Also, Park's group has also worked various thin films with novel precursors as well as the FET device applications by using ALP. Based on Scholar Google, his citation # and h-index are 20758 and 59 on Nov. 2023, respectively.

[Academic Background]

1993.3~1997.2 Materials Science & Engineering, KAIST, bachelor's degree (B. S.)

1997.3~1999.2 Materials Science & Engineering, KAIST, master's degree (M. S.)

1999.3~**2002.8 Materials Science & Engineering, KAIST, Ph. D.**

Thesis: A study on the plasma-enhanced atomic layer deposition of Ta-N, Ti-N, Ti-Si-N thin films, (**Advisor: Prof. Sang-Won Kang**)

2003.1~2005.1 Department of Chemistry and Chemical Biology, *Harvard University*, Post-Doctor, (**Advisor: Roy G. Gordon**)

2005.3~2008.9 Center of R & D, *Samsung SDI*, Senior Researcher

2008.9~2009.8 Research Center, *Samsung Mobile Display*, Senior Researcher,

2009.9~2013.2 Materials Science and Engineering, Dankook University, Assistant Professor

2013.3~Present Division of Materials Science and Engineering, Hanyang University, Professor

(Graduate School) Division of Nanoscale Semiconductor Engineering, Hanyang University, Professor

(Graduate School) Department of Display Engineering, Hanyang University, Professor

[Research Activity]

1. SCI Journal: Over **280 peer-reviewed Papers [Including 7 Review papers]**

2. Patent

3. Book Chapter (2 books):

- Handbook of Visual Display Technology 2016 (ISBN 978-3-319-14345-3)

- Amorphous Oxide Semiconductors: IGZO and Related Materials for Display and Memory, (2022)

4. Over 50 Keynote/Invited/Tutorial Lecture in International conferences (AVS, ALD, IMID, IDW etc.)

[Awards, Honors and Recognition]

1. **'Merck Special Award'** for ALD material and Process: Contribute for oxide semiconductor as channel material for memory & display application. (2021.11)

2. **General Chair**, 18th International Atomic Layer Deposition 2018 (ALD 2018) in Songdo Korea

3. **'KEIT (Korea Evaluation Institute of Technology) President Award'** (2017.8)

4. **'Merck Young Scientist Award'** (2014.8)

5. **Best Paper Award Certificate Gold**, International Meeting on Information Display (IMID) (2016.8)

6. **Bronze Award (KIDS Award)**, International Meeting on Information Display (IMID) (2015.8)

7. **Gold Award (KIDS Award)**, International Meeting on Information Display (IMID) (2014.8)



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on Manufacturing Technology 2023 (KISM 2023)**
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Lab Page: <http://hylime.kr>