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## I. EDUCATION

**University of Illinois at Urbana-champaign**  
**Ph.D. in Materials Science and Engineering (2013)**

**Hanyang University**  
**M.S. in Materials Science and Engineering (2005)**

**Hanyang University**  
**B.S. in Materials Science and Engineering (2003)**

## II. AWARDS

**Fulbright Scholarship (2008 - 2010)**

BK21 (Brain Korea 21), 3 semester (2003~2005)

Hanyang Graduate University, 1 semester (2003)

Hanyang University, 3 semesters (2000~2001)

## III. APPOINTMENTS AND TRAINING

**University of Illinois at Urbana-champaign**  
Post-doctoral Fellow (2013 – present)  
Department of Materials Science and Engineering  
Frederick Seitz Materials Research Laboratory  
Advisor: John A. Rogers

**University of Illinois at Urbana-champaign**  
Graduate Research Assistant (2008 - 2013)  
Department of Materials Science and Engineering  
Frederick Seitz Materials Research Laboratory  
Advisor: John A. Rogers

**Hanyang University**  
Graduate Research Assistant (2003 – 2005)  
Department of Materials Science and Engineering  
Advisor: Chang Kyung Kim

## IV. INDUSTRY EXPERIENCE

Samsung Electronics Co., LTD. (2005 ~ 2007)  
Memory Division, Semiconductor Business, Assistant Engineer  
A member of Team, it developed **the world's first "16G NAND FLASH MEMORY"**

## V. INTELLECTUAL PROPERTY

John A. Rogers, Fiorenzo G. Omenetto, **Suk-Won Hwang**, Hu Tao, Dae-Hyeong Kim, David Kaplan. 2013. Transient devices designed to undergo programmable transformations. U.S/International patent US 20130140649 A1, WO 2013089867 A2/A3.

## VI. PUBLICATIONS

[18] Seung-Kyun Kang\*, **Suk-Won Hwang**\*, Huanyu Cheng, Sooyoun Yu, Bong Hoon Kim, Jae-Hwan Kim, Yonggang Huang, John A. Rogers (\*equally contributed)

“Dissolution behaviors and applications of silicon oxides and nitrides in transient electronics”, *submitted to **Advanced Functional Materials*** (2014), DOI: 10.1002/adfm.201304293

[17] **Suk-Won Hwang**, Jun-Kyul Song, Xian Huang, Huanyu Cheng, Seung-Kyun Kang, Jae-Hwan Kim, Sooyoun Yu, Yonggang Huang, John A. Rogers

“High performance biodegradable/transient electronics on biodegradable polymers”, ***Advanced Materials*** (2014), DOI: 10.1002/adma.201306050

[16] **Suk-Won Hwang**, Gayoung Park, Chris Edwards, Elise Corbin, Seung-Kyun Kang, Huanyu Cheng, Jun-Kyul Song, Jae-Hwan Kim, Sooyoun Yu, Joanne Ng, Jung Eun Lee, Cassian Yee, Basanta Bhaduri, Fiorenzo G. Omenetto, Yonggang Huang, Rashid Bashir, Lynford Goddard, Gabriel Popescu, Kyung-Mi Lee, John A. Rogers

“Dissolution chemistry and biocompatibility of single crystalline silicon nanomembranes and associated materials for transient electronics”, ***ACS Nano*** (2014), DOI: 10.1021/nn500847g

[15] **Suk-Won Hwang**, Gayoung Park, Huanyu Cheng, Jun-Kyul Song, Seung-Kyun Kang, Lan Yin, Jae-Hwan Kim, Fiorenzo G. Omenetto, Yonggang Huang, Kyung-Mi Lee, John A. Rogers

“25th Anniversary Article: Materials for high performance biodegradable semiconductor devices”, ***Advanced Materials*** 26, 1992-2000 (2014)

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[14] Lan Yin, Huanyu Cheng, Shimin Mao, Richard Haasch, Yuhao Liu, Xu Xie, **Suk-Won Hwang**, Harshvardhan Jain, Seung-Kyun Kang, Yewang Su, Rui Li, Yonggang Huang, John A. Rogers

“Dissolvable Metals for Transient Electronics”, *Advanced Functional Materials* 24, 645-658 (2014)

[13] Canan Dagdeviren\*, **Suk-Won Hwang**\*, Yewang Su, Stanley Kim, Huanyu Cheng, Ryan Haney, Yonggang Huang, John A. Rogers (\*equally contributed)

“Transient, Biocompatible Electronics and Energy Harvesters Based on ZnO”, *Small* 9, 3398-3404 (2013)

[12] **Suk-Won Hwang**, Dae-Hyeong Kim, Hu Tao, Tae-il Kim, Stanley Kim, Ki Jun Yu, Bruce Panilaitis, Jae-Woong Jeong, Fiorenzo G. Omenetto, John. A. Rogers

“Materials and fabrication processes for transient and bioresorbable high performance electronics”, *Advanced Functional Materials* 23, 4087-4093 (2013)

[11] **Suk-Won Hwang**, Xian Huang, Jung-Hun Seo, Jun-Kyul Song, Stanley Kim, Sami Hage-Ali, Hyun-Joong Chung, Elliott Rill, Hu Tao, Fiorenzo G. Omenetto, Zhenqiang Ma, John A. Rogers, “Materials for bioresorbable radio frequency electronics”, *Advanced Materials* 25, 3526-3531 (2013)

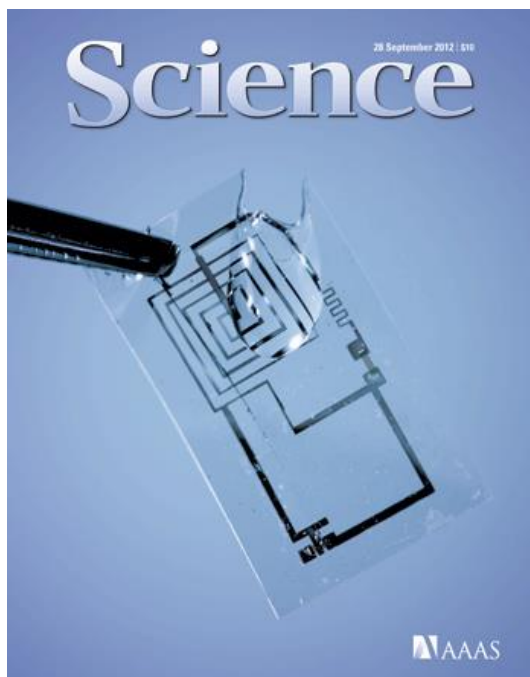
[10] Rui Li, Huanyu Cheng, Yewang Su, **Suk-Won Hwang**, Lan Yin, Hu Tao, Mark A. Brenckle, Dae-Hyeong Kim, Fiorenzo G. Omenetto, John A. Rogers, Yonggang Huang

“An analytical model of reactive diffusion for transient electronics”, *Advanced Functional materials* 23, 3106-3114 (2013)

[9] S.-W. Hwang, H. Tao, D.-H. Kim, H. Cheng, J.-K. Song, E. Rill, M.A. Brenckle, B. Panilaitis, S.M. Won, Y.-S. Kim, Y.M. Song, K.J. Yu, A. Ameen, R. Li, Y. Su, M. Yang, D.L. Kaplan, M.R. Zakin, M.J. Slepian, Y. Huang, F.G. Omenetto, J.A. Rogers,

“A Physically Transient Form of Silicon Electronics,” *Science* 337, 1640-1644 (2012).

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[8] J. Viventi, D.-H. Kim, L. Vigeland, E.S. Frechette, J.A. Blanco, Y.-S. Kim, A.E. Avrin, V.R. Tiruvadi, S.-W. Hwang, A.C. Vanleer, D.F. Wulsin, K. Davis, C.E. Gelber, L. Palmer, J. Van der Spiegel, J. Wu, J. Xiao, Y. Huang, D. Contreras, J.A. Rogers, B. Litt.,

“Flexible, Foldable, Actively Multiplexed, High-Density Electrode Array for Mapping Brain Activity In Vivo,” *Nature Neuroscience* 14, 1599-1605 (2011).

[7] D.-H. Kim, N. Lu, R. Ghaffari, Y.-S. Kim, S.P. Lee, L. Xu, J. Wu, R.-H. Kim, J. Song, Z. Liu, J. Viventi, B. de Graff, B. Elolampi, M. Mansour, M.J. Slepian, S. Hwang, J.D. Moss, S.-M. Won, Y. Huang, B. Litt, J.A. Rogers,

“Materials for Multifunctional Balloon Catheters With Capabilities in Cardiac Electrophysiological Mapping and Ablation Therapy,” *Nature Materials* 10, 316-323 (2011).

[6] Lim, S.U., Kim, J., Hwang, S.W., Kim, C.K., Yoon, C.S.

“Crystallization of  $\text{Co}_{58-x}\text{Mn}_{20}\text{Ge}_x\text{B}_{10}\text{Si}_{12}$  ( $x = 5, 10$ ) metallic glasses “  
*Materials Science and Engineering A* 448-451, 531-534 (2007)

- [5] **Hwang, S.W.**, Kim, J., Lim, S.U., Kim, C.K., Yoon, C.S.  
“Magnetostrictive properties and microstructure of thermally annealed Sm-Fe thin films”  
*Materials Science and Engineering A* 449-451, 378-381 (2007)
- [4] **Hwang, S.-W.**, Im, D.H., Chun, I.S., Yoon, C.S., Kim, C.K.  
“Crystallization and structural relaxation of  $\text{Co}_{48}\text{Mn}_{20}\text{Ge}_{10}\text{B}_{10}\text{Si}_{12}$  amorphous alloy”  
*Journal of Alloys and Compounds* 413, 206-210 (2006)
- [3] **Hwang, S.-W.**, Kim, S.J., Yoon, C.S., Kim, C.K.  
“Crystallization and structural relaxation of  $\text{Fe}_{78-x}\text{Pt}_x\text{B}_{10}\text{Si}_{12}$  metallic glasses”  
*Physica Status Solidi (A) Applied Research* 201, 1875-1878 (2004)
- [2] Im, D.H., Yoo, C.-S., Kim, S.J., **Hwang, S.-W.**, Chun, I.S., Yoon, C.S., Kim, C.K.  
“Structure and magnetic properties of exchange-coupled Co-CoPt nanocomposite thin films”  
*Physica Status Solidi (A) Applied Research* 201, 1862-1865 (2004)
- [1] Kim, S.J., **Hwang, S.-W.**, Yoon, C.S., Kim, C.K.  
“Structure and magnetic properties of thermally annealed  $\text{Fe}_{73}\text{Pt}_5\text{B}_{10}\text{Si}_{12}$  amorphous metallic alloy”  
*Materials Science and Engineering B: Solid-State Materials for Advanced Technology* 108, 266-270 (2004)

## VII. BOOKS

**Suk-Won Hwang**, John A. Rogers. Materials, Device Designs, and Integration Approaches for Transient, Bio-resorbable Silicon Electronic Systems. Scholars' Press, OmniScriptum GmbH & Co. KG, Saarbrücken, Germany. (Currently under development).