



Shih-kang Lin
(林 士剛)

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Education

Ph.D. in Chemical Engineering, *National Tsing Hua University, Hsinchu, Taiwan* (2008)

B.S. in Chemical Engineering, *National Tsing Hua University, Hsinchu, Taiwan* (2003)

Current Positions

Distinguished Professor, 08/2023 – Present
*Department of Materials Science and Engineering,
National Cheng Kung University (NCKU), Taiwan*

Program Director, 08/2022 – Present
*Academy of Innovative Semiconductor and Sustainable Manufacturing (AISSM), Smart and
Sustainable Manufacturing (PSSM), National Cheng Kung University (NCKU), Taiwan*

Vice Director, 08/2018 – Present
Hierarchical Green-energy Materials (Hi-GEM) Research Center, NCKU, Taiwan

Professional Experiences

- ◆ **Visiting professor** at *Osaka University, Japan.* (2024)
- ◆ **Visiting professor** at *Forschungszentrum Jülich, Germany.* (2022)
- ◆ **Professor** at *National Cheng Kung University, Taiwan.* (2020-2023)
- ◆ **Associate Professor** at *National Cheng Kung University, Taiwan.* (2015-2020)
- ◆ **Vice Director of Research and Service Headquarters (RSH), NCKU, Taiwan. (2019-2020)**
- ◆ **Director of R&D Center of Southern Taiwan Science Park, NCKU, Taiwan. (2019)**
- ◆ **Business Division Director of RSH, NCKU, Taiwan** (2017-2019)
- ◆ **Visiting Associate Professor** at *Osaka University, Japan.* (2015)
- ◆ **Assistant Professor** at *National Cheng Kung University, Taiwan.* (2011-2015)
- ◆ **Research Associate** at *University of Wisconsin – Madison, USA.* (2009-2011)
- ◆ **Visiting Scholar** at *the Pennsylvania State University, University Park, USA.* (2007-2008)
- ◆ **Visiting Scholar** at *Osaka University, Japan.* (2006)

Research Expertise & Interests

- ◆ **Materials Thermodynamics** (Phase equilibria, phase transformation and materials design).
- ◆ **Computational Materials Science** (*ab initio* calculations and CALPHAD modeling).
- ◆ **Electronic Materials:** Advanced electronic interconnection, electromigration effect, *etc.*
- ◆ **Energy Materials:** Li ion batteries (cathode, anode & solid-state electrolyte), Na battery, *etc.*
- ◆ **Structural Materials:** Ironmaking/steelmaking, high-entropy alloys, high-strength Al alloys, *etc.*

Publications in Referred Journals/Patents/Book Chapters

102 published referred journal papers, 3 book chapters, and 17 granted patents (8 ROC (Taiwan) patents, 3 Japan patents, 3 US patent, 1 PCT patent and 2 China patent). According to the *Google Scholar* database, 2360 times cited, *H-index* is 27, and *i10-index* is 60.

Selected Editing Experiences

- ♦ **Associate Editor** of *IEEE Trans. Comp. Packag. Manufac. Tech.* (2023-Present)
- ♦ **Advisor** of *Journal of Materials (JOM), USA* (2017-2019)
- ♦ **Guest Editor** of *Journal of Materials (JOM), USA* (2018-2022)
- ♦ **Guest Editor** of *Journal of Electronic Materials (JEM), USA.* (2016-2019)
- ♦ **Guest Editor** of *IEEE Trans. Comp. Packag. Manufac. Tech.* (2021-2023)

Selected Professional Services

- ♦ **Chairperson** of *Phase Diagram & Thermodynamics Committee, MRS-T, Taiwan* (2023-Present)
- ♦ **Symposium Organizer** *TMS, USA* (2011-Present)
- ♦ **Symposium Organizer** *ICACC, USA* (2022-Present)
- ♦ **Chair** of the *Alloy Phase Committee, TMS, USA* (2019-2021)
- ♦ **Vice Chair** of the *Alloy Phase Committee, TMS, USA* (2017-2019)
- ♦ **Secretary** of the *Alloy Phase Committee, TMS, USA* (2015-2017)
- ♦ **Committee Member**,
Alloy Phase Diagram International Commission (APDIC), Sweden
Alloy Phase Committee, TMS, USA
International Conference on Electronics Packaging (ICEP), Japan
Technical Program Committee (TPC), IMPACT, Taiwan

Selected Awards & Honors

1. NSTC 2030 Cross-Generation Young Scholars Program (2023)
National Science and Technology Council (NSTC), Taiwan
2. Future Tech Award, Future Tech Pavilion (FUTEX) (2022, 2023)
National Science and Technology Council (NSTC), Taiwan
3. NCKU Outstanding Academia-Industry Cooperation Award (2022, 2023)
National Cheng Kung University, Taiwan
4. Engineering Professor Award (2022)
The Chinese Institute of Engineers (CIE) Kaohsiung Branch, Taiwan
5. Humboldt Research Fellowship (2021)
Alexander von Humboldt Foundation, Germany
6. MOST Columbus Scholar (2020)
Ministry of Science and Technology (MoST), Taiwan
7. Ta-You Wu Memorial Award (2019)
Ministry of Science and Technology (MoST), Taiwan
8. NCKU Excellence-in-Teaching Award (2015)
National Cheng Kung University, Taiwan
9. Outstanding Young Scholar Award (2017)
The Materials Research Society – Taiwan (MRS-T), Taiwan
10. TMS Young Professional Development Award (2014)
The Minerals, Metals & Materials Society (TMS), USA
11. Best Young Professional Poster Award (2014)
TMS 2014 Annual Meeting, The Minerals, Metals & Materials Society (TMS), USA
12. Award for Encouragement of Research in Materials Science (Symposium D-5) (2012)
IUMRS-ICEM 2012, Materials Research Society of Japan (MRS-J), Japan
13. Stiftelse för Tillämpad Termodynamik (STT) Grant (2011)
Stiftelse för Tillämpad Termodynamik (Foundation for Applied Thermodynamics), Sweden