

# Ady Suwardi

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🎓 : 2018 (PhD) ; **Date of Birth:** February 1991

**Nationality:** Singapore Citizen

**Referees:** Prof. Judith Driscoll, University of Cambridge, U.K. ([jld35@cam.ac.uk](mailto:jld35@cam.ac.uk))

Prof. Jianwei Xu, A\*STAR, Singapore ([xu\\_jianwei@isce2.a-star.edu.sg](mailto:xu_jianwei@isce2.a-star.edu.sg))

Prof. Qingyu Yan, MSE, NTU, Singapore ([alexyan@ntu.edu.sg](mailto:alexyan@ntu.edu.sg))



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## Overview

Ady Suwardi received his PhD from University of Cambridge, U.K., and B.Eng from Nanyang Technological University (NTU), Singapore. He is currently an Adj. Asst. Prof. in National University of Singapore (NUS), department of Materials Science and Engineering (MSE). He is also a group leader in A\*STAR, Singapore. His main research area focuses on fundamental thermal and electronic properties of sustainable energy materials, as well as their manufacturing and device applications. He has published a total of >80 papers, with >30 corresponding/first authored papers in prestigious journals such as *Nature Electronics*, *Advanced Materials*, *ACS Energy Letters*, and *Nano Energy*. He has *h-index* of 28, and *FWCI* (2019-2022) of 2.50. For his research works, he was awarded **Nanoscale Emerging Investigator 2022**, **Journal of Materials Chemistry A Emerging Investigator 2022**, and winner of **EU-ASEAN Youth Sustainable Project Competition 2022**. In terms of academic services, he currently serves as early career editorial board in *Materials Today Energy* and Youth editorial board in *Soft Science*. He has also served as the referee for >150 articles in >30 peer-reviewed journals including prestigious journals such as *Science*, *Advanced Energy Materials*, *Angewandte Chemie*, and *Advanced Functional Materials*. He is also the recipient of outstanding reviewer award from *Journal of Materials Chemistry A* in 2020. Beyond academics, he is also a recipient of 2 Singapore National Awards from the [Prime Minister Office](#) and [Government Gazette](#) for his technical contributions during the COVID-19.

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## Academic Qualifications

### ❖ University of Cambridge, United Kingdom

Ph.D. in *Materials Science*

Oct 2018

Advisor: **Prof. Judith MacManus Driscoll** (Cambridge, U.K.)

Examiners: **Prof. Zoe Barber** (Cambridge, U.K.) and **Prof. Joe Briscoe** (QMUL, U.K.).

### ❖ Nanyang Technological University (NTU)

B.Eng in *Materials Engineering (First Class Honours)*

July 2012

Double minor in *Physics and Environmental Management*

Mentors: **Prof. Hng Huey Hoon** and **Prof. Lam Yeng Ming**.

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## Current and Past Employment History

### ❖ Institute of Materials Research and Engineering (IMRE), A\*STAR

Deputy head of department – Soft Materials/Scientist III

Oct 2017 – Present

### ❖ Materials Science and Engineering, National University of Singapore (NUS)

Adjunct Assistant Professor

May 2021 – Present

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## Academic Awards

- ❖ Featured in [Journal of Materials Chemistry A, B and C 10th Anniversary Community Spotlight: Outstanding Reviewers](#), 2023.

- ❖ SNIC (Singapore National Institute of Chemistry) - Prof Lee Soo Ying Early Career Research Award (Silver) 2023.
  - ❖ COVID-19 Resilience Medal, Singapore 2023.
  - ❖ *Nanoscale* Emerging Investigator Award 2022.
  - ❖ *Journal of Materials Chemistry A* Emerging Investigator Award 2022.
  - ❖ EU-ASEAN Youth Sustainable Project Competition Award 2022.
  - ❖ The Commendation Medal (COVID 19) from Prime Minister Office (PMO), Singapore, 2022
  - ❖ Ministry of Trade and Industry (MTI) Borderless Silver Award, 2021
  - ❖ A\*STAR Graduate Scholarship (overseas) 2013-2017.
  - ❖ President Research Scholarship 2011.
  - ❖ SembCorp Undergraduate Scholarship 2008 – 2012.
  - ❖ Ian Ferguson Innovation Award 2011.
  - ❖ Gold Medalist of 2008 IOAA (International Olympiad on Astronomy and Astrophysics).
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## Academic Services

- ❖ Special issue on "[Thermoelectrics and Energy Harvesting Materials](#)" in ChemNanoMat 2023.
  - ❖ Early Career Researcher (ECR) Editorial Board of *Materials Today Energy* 2021- present.
  - ❖ Youth Editorial Board of *Soft Science* 2021 - present.
  - ❖ *Materials Today Energy* top reviewer 2022.
  - ❖ co-Editor in Chief of *World Scientific Annual Review of Functional Materials*.
  - ❖ Outstanding Reviewer Award from *Journal of Materials Chemistry A* 2020.
  - ❖ Active peer reviewer (> 180 articles in >30 journals) including *Science*, *Advanced Energy Materials*, *Advanced Functional Materials*, *Angewandte Chemie*, *Chemical Engineering Journal*, *Journal of Materials Chemistry A*, and so on.
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## Research Grants

- ❖ **Lead PI** of 2023 **multi-national competitive research program** (with Singapore, Thailand, and Myanmar team) east-Asia Joint Research Program for program "NEST-Novel Energy Scavenging Technology" worth S\$ 297,050.00 – Singapore portion (Period: 01 Feb 2023 – 31 Jan 2026).
  - ❖ **Co-PI** of ID 2023 HTCO 2nd Seed Fund "AeroShield - Simulations-Assisted Development of A Novel Biosafety Air Curtain for Aerosol-Generating Dental Procedures" worth S\$ 250,000.00 (period: 01 Jan 2023 – 30 June 2024).
  - ❖ **Co-PI** of 2023 Young Individual Research Grant (YIRG) for project "Vat Photopolymerization of Hierarchical Porous Complex Thermoelectrics for IoT applications" worth S\$ 325,000.00 (Period: 01 Apr 2023 – 31 Mar 2026).
  - ❖ **Lead PI** of 2022 Singapore Aerospace Program for project "Thermoelectrics for Commercial Aircraft Applications" worth S\$ 312,108.00 (Period: 01 Feb 2022 - 31 Jan 2024). Letter of award available upon request.
  - ❖ **Lead PI** of 2021 A\*STAR Career Development Fund (CDF) for project "Brain-inspired Vision Sensors" worth S\$ 232,000.00 (Period: 01 Apr 2021 – 31 Mar 2024). Letter of award available upon request.
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## Conferences and Invited Talks

- ❖ **Invited talk** for IUMRS-ICA 2023, Kyoto, Japan, 11<sup>th</sup> – 16<sup>th</sup> Dec, 2023.
- ❖ **Invited talk** for PACIRIM15 & CICC-13 Conference, Shenzhen, China, 05<sup>th</sup> – 09<sup>th</sup> Nov, 2023.
- ❖ **Symposium Organizer** EMP23, Singapore, 17<sup>th</sup> – 20<sup>th</sup> Aug, 2023.
- ❖ **Invited talk** for Materials Today Conference 2023, Singapore, 2<sup>nd</sup> – 5<sup>th</sup> Aug, 2023.
- ❖ **Invited talk** for ECOMAT Conference 2023 Symposium D, 20<sup>th</sup> – 24<sup>th</sup> June, 2023
- ❖ **Invited** delegate for ASEAN-EU Youth Conference on Sustainable Urban Development, Bangkok, Thailand, 31<sup>st</sup> Mar – 01<sup>st</sup> Apr, 2023.
- ❖ **Invited** for Global Young Scientists Summit (GYSS) Singapore, 17<sup>th</sup> – 20<sup>th</sup> Jan, 2023.
- ❖ **Invited** for Global Young Scientists Summit (GYSS) Singapore, 17<sup>th</sup> – 21<sup>th</sup> Jan, 2022.
- ❖ **Plenary talk at ICIMD** (International Conference on Intelligent Materials Design), Dalian University of Technology, China, 24<sup>th</sup> – 26<sup>th</sup> June, 2022

- ❖ **Invited Talk and Session Chair** for ICEM (International Conference on Energy Materials), Xiamen University Malaysia, 16<sup>th</sup> – 19<sup>th</sup> April, 2021.
- ❖ **Invited Talk and Session Chair** for VCT (Virtual International Conference of Thermoelectrics), online, 21<sup>th</sup> – 23<sup>th</sup> July, 2020.
- ❖ Oral presentation in ChnmSG5 Conference by SNIC Singapore, 28<sup>th</sup> July 2023.
- ❖ Oral Presentation in 41st RSC Solid State Chemistry Group Christmas Meeting, Cambridge, U.K., 19<sup>th</sup> – 20<sup>th</sup> Dec 2022.
- ❖ Oral presentation in IMRC Mexico, 14<sup>th</sup>-19<sup>th</sup> August, 2022.
- ❖ Oral presentation in MRS Fall Meeting, Boston, December 2019.
- ❖ Oral presentation and poster in 10<sup>th</sup> ICMAT, Singapore, June 2019.
- ❖ Oral presentation and poster in 9<sup>th</sup> ICMAT, Singapore, June 2017.
- ❖ Best poster award in ISAF Conference Darmstadt, Germany, August 2016.
- ❖ Poster presentation in 5<sup>th</sup> M3 meeting, Singapore, August 2015.
- ❖ Poster presentation in ICMR mini school & workshop at UCSB, August 2014.

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## Technology Disclosures and Patents

- ❖ A. Suwardi, C.K.I. Tan, “Small exhaust fan for surgical mask breathing comfort” *Singapore patent* no. 10202111160T on 07 October 2021.
- ❖ TD 2022055: Method of Turning Waste Silicon into Thermoelectrics
- ❖ TD 2020093: Self-powered cooling system for indoor agriculture/greenhouse.
- ❖ TD 2021058: A self-powered thermoelectric system for LED cooling.
- ❖ TD 2021034: Particle filtration system for cleaner air.
- ❖ TD 2021035: Design and method of homemade fan-fitted air purifier from common household materials.
- ❖ TD 2021036: Technology and method to detect, quantify, and analyze aerosol transmission.

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## Talent Development / Mentoring

- ❖ Group leader leading a team of 2 research fellows (Dr. Danwei Zhang, Dr. Xian Yi Tan) and 1 research officer (Ms. Solco Samantha Faye Duran), 6 MSc students (Guo Jingchun, Xie Mingkun, Zhao Jingtian, Zhang Lingwei, Zhang Qianying, and Anna Ramesh Babu Nagarajan), and high school intern (Mr. Ivan Joel You Wen Jie, NUS High School) 2022 - present.
- ❖ PhD supervisor for Kivanc Saglik (NTU, Singapore) and Sophie Guillemot (University of Manchester, U.K.). 2022 – present.
- ❖ Supervisor for Ong Kai (SIT intern), Sia Seng Ann (NTU intern) 2021-2023.
- ❖ IMRE host for Ning Jia and Jinfeng Dong (visiting scientists from NTU MSE) 2021 - 2023.
- ❖ IMRE host for Lan Yang, Chu Zhang, and Yong Wang (visiting Ph.D. students from NTU MSE) 2019-2021.
- ❖ IMRE host for Dr. Zhao Yunshan (visiting scientists from NTU MSE) 2019-2020.
- ❖ IMRE host for Dr. Hu Lei (visiting scientists from NTU MSE) 2018-2019.
- ❖ Supervisor for Yap Shou Xuan (FYP student from NUS with Prof. Ariando) 2018-2019.
- ❖ IMRE host for Khang Ngoc Dinh (visiting Ph.D. student from NTU MSE) 2018-2020.
- ❖ Supervisor for Michael Darmawan (FYP student from NTU) 2019.
- ❖ Supervisor for Marcella Marissa (FYP student from NTU) 2018.
- ❖ Supervisor for Amol Paranjape (intern from Cornell University) 2018.

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## Science Outreach Activities

- ❖ Research mentor for 2023 Singapore Science and Engineering Festival (SSEF) Student (Ivan You – Gold Medal), 2023 National Science Talent Search (Ivan You – Silver award), and 2023 International Science and Engineering Festival (ISEF) student (Ivan You, Bronze medal)

- ❖ Invited speakers (3 sessions) for AGA (A\*STAR Graduate Academy) webinars to secondary school students 2021.
- ❖ Panelist for Singapore Science and Engineering Fair (SSEF) 2020.
- ❖ Judge for Science Buskers Audition 2019.
- ❖ Judge for Raffles Symposium 2019.
- ❖ Demonstrator for One-North Science Festival lab tours and workshops 2018.
- ❖ University of Cambridge Annual Science Festival 2015.
- ❖ Supervisor for Scientists-in-school program 2013.
- ❖ MSE Eduweek Speaker 2012.
- ❖ Organizer of Astro Challenge astronomy competition for JC students 2011.
- ❖ Organizer of MSE Challenge competition for Singapore JC students 2010.
- ❖ Vice-President for NTU Astronomical Society 2009-2010.

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## Academic Referees

1. **Prof. Judith Driscoll**, Editor-in-Chief *APL Materials*, University of Cambridge, U.K. (jld35@cam.ac.uk)
2. **Prof. Jianwei Xu**, Deputy Executive Director, ISCE2, A\*STAR, Singapore. (xu\_jianwei@isce2.a-star.edu.sg)
3. **Prof. Gang Zhang**, Senior Scientist, IHPC, A\*STAR, Singapore (zhangg@ihpc.a-star.edu.sg)
4. **Prof. Qingyu Yan (Alex)**, Professor, MSE, NTU, Singapore (Alexyan@ntu.edu.sg)
5. **Dr. Steven Lukman**, Assoc Editor *Nature Materials*, U.K. (steven.lukman@nature.com)
6. **Prof. Hongjin Fan**, Editor-in-Chief *Materials Today Energy*, NTU, Singapore (fanhj@ntu.edu.sg)
7. **Prof. Zhifeng Ren**, Editor-in-Chief *Materials Today Physics* and *Soft Science*, University of Houston, Texas, USA ([zren@uh.edu](mailto:zren@uh.edu))

## ANNEX

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### Leading – authored Publications

*h*-index: 28 ; total citations: 1785

# : **First (co-first) author** ; ✉ : **corresponding author**. More information in [Google Scholar](#).

1. H.K. Ng<sup>#</sup>, D. Xiang<sup>#</sup>, **A. Suwardi**<sup>#</sup>, G. Hu, K. Yang, Y. Zhao, T. Liu, Z. Cao, H. Liu, S. Li, J. Cao. *Nature Electronics*. 2022 Jun 9:1-8. **[Impact factor: 33.255]**  
\* **Highlighted by** [Tech Xplore](#), [EurekAlert](#), [Phys Org](#).
2. J. Cao, Y. Sim, X.Y.Tan, J. Zheng, S.W. Chien, N. Jia, K. Chen, Y.B. Tay, J.F. Dong, L. Yang, **A. Suwardi**<sup>✉</sup>. *Advanced Materials*. 2022 May;34(19):2110518. **[Impact factor: 32.086]**  
\* **Highlighted by** [Nature](#), [PV Magazine](#), [Interesting Engineering](#), [Nanowerk](#), [Eurekalert](#), [Straits Times](#), and [Lianhe Zaobao](#), [NRF Magazine](#).
3. **A. Suwardi**, F. Wang, K. Xue, M. Y. Han, P. Teo, P. Wang, S. Wang, Y. Liu, E. Ye and Z. Li, *Advanced Materials*, 2021, 2102703. **[Impact factor: 32.086]**
4. D. Zhang, X.J.G. Lim, X. Li, K. Saglik, S.F.D. Solco, X.Y. Tan, Y. Leow, W. Zhai, C.K.I. Tan, J. Xu, **A. Suwardi**<sup>✉</sup>. *ACS Energy Letters* 8 (2022): 332-338. **[Impact factor: 23.991]**
5. D. Zhang, W. Y. S. Lim, S. S. F. Duran, X. J. Loh and **A. Suwardi**<sup>✉</sup>, *ACS Energy Letters*, 2022, 7, 720-735. **[Impact factor: 23.991]**

6. J. Cao, J. Dong, K. Saglik, ..., J. Xu, J. Wu, F. Wei, Q. Yan, **A. Suwardi**<sup>✉</sup>. *Nano Energy* 2022: 108118. **[Impact factor: 19.069]**
7. J. Cao, X.Y. Tan, N. Jia, J. Zheng, S.W. Chien, H.K. Ng, C.K.I. Tan, H. Liu, Q. Zhu, S. Wang, G. Zhang, **A. Suwardi**<sup>✉</sup>. *Nano Energy*. 2022 Jun 1;96:107147. **[Impact factor: 19.069]**
8. J. Zheng, S.F.D. Solco, C.J.E. Wong, S.A. Sia, X.Y. Tan, J. Cao, .. **A. Suwardi**<sup>✉</sup>. *Journal of Materials Chemistry A*, 2022, 10, 19787-19796. **[Impact factor: 14.511]**  
 \* *selected for the prestigious 2022 Journal of Materials Chemistry A Emerging Investigator issue.*  
 # *selected for 2023 Journal of Materials Chemistry A Lunar New Year collection.*
9. N. Jia, J. Cao, X. Y. Tan, J. Zheng, S. W. Chien, L. Yang, K. Chen, H. K. Ng, S. S. F. Duran and **A.Suwardi**<sup>✉</sup>, *Journal of Materials Chemistry A*, 2021, 9, 23335-23344. **[Impact factor: 14.511]**  
 \* *selected for back cover of the issue.*  
 # *2021 JMCA most popular articles (50 out of ~2500)*
10. B. Zhu, Y. Luo, H. Wu, D. Sun, L. Liu, S. Shu, Z. Luo, Q. Zhang, **A.Suwardi**<sup>✉</sup>, Y. Zheng<sup>✉</sup>. *Journal of Materials Chemistry A*. 2023, 11(16):8912-21. **[Impact factor: 14.511]**
11. **A. Suwardi**, J. Cao, L. Hu, F. Wei, J. Wu, Y. Zhao, S. H. Lim, L. Yang, X. Y. Tan and S. W. Chien, *Journal of Materials Chemistry A*, 2020, 8, 18880-18890. **[Impact factor: 14.511]**
12. **A. Suwardi**, D. Bash, H. K. Ng, J. R. Gomez, D. M. Repaka, P. Kumar and K. Hippalgaonkar, *Journal of Materials Chemistry A*, 2019, 7, 23762-23769. **[Impact factor: 14.511]**
13. J. Cao, X.Y. Tan, J. Dong, H. Liu, Y. Zheng, Q. Zhu, J. Xu, G. Zhang, J. Wu, **A. Suwardi**<sup>✉</sup>. *Materials Today Physics*. 2023, 1, 34:101071. **[Impact factor: 11.021]** \* *Invited paper*
14. **A. Suwardi**, J. Cao, Y. Zhao, J. Wu, S. Chien, X. Tan, L. Hu, X. Wang, W. Wang and D. Li, *Materials Today Physics*, 2020, 14, 100239. **[Impact factor: 11.021]**
15. N. Jia, J. Cao, X. Y. Tan, J. Dong, H. Liu, C. K. I. Tan, J. Xu, Q. Yan, X. J. Loh and **A.Suwardi**<sup>✉</sup>, *Materials Today Physics*, 2021, 21, 100519. **[Impact factor: 11.021]**
16. **A. Suwardi**<sup>#</sup>, C. C. Ooi<sup>#</sup>, D. Daniel, C. K. I. Tan, H. Li, O. Y. Z. Liang, Y. K. Tang, J. Y. Chee, A. Sadovoy and S.-Y. Jiang, *Research*, 2021, 2021. **[Impact factor: 11.036]**  
 \* *Highlighted by A\*STAR research magazine and Straits Times.*
17. Xue K<sup>#</sup>, Wang F<sup>#</sup>, **Suwardi A**<sup>#</sup>, Han MY, Teo P, Wang P, Wang S, Ye E, Li Z, Loh XJ. *Materials Today Bio*. 2021 Sep 1;12:100165. **[Impact factor: 10.761]**
18. **A. Suwardi**, L. Hu, X. Wang, X. Y. Tan, D. V. M. Repaka, L.-M. Wong, X. Ni, W. H. Liew, S. H. Lim and Q. Yan, *ACS applied materials & interfaces*, 2020, 12, 9150-9157. **[Impact factor: 10.383]**
19. Zhang D, Duran SS, Lim WY, Tan CK, Cheong WC, **Suwardi A**<sup>✉</sup>, Loh XJ. *Materials Today Advances*. 2022 Mar 1;13:100211. **[Impact factor: 9.918]**
20. J. Cao, J. Zheng, H. Liu, C. K. I. Tan, X. Wang, W. Wang, Q. Zhu, Z. Li, G. Zhang and **A.Suwardi**<sup>✉</sup>, *Materials Today Energy*, 2022, 100964. **[Impact factor: 9.257]**
21. J. Cao, X. Y. Tan, N. Jia, D. Lan, S. F. D. Solco, K. Chen, S. W. Chien, H. Liu, C. K. I. Tan and **A.Suwardi**<sup>✉</sup>, *Nanoscale*, 2022, 14, 410-418. **[Impact factor: 8.307]**
22. **A. Suwardi**, B. Prasad, S. Lee, E.-M. Choi, P. Lu, W. Zhang, L. Li, M. Blamire, Q. Jia and H. Wang, *Nanoscale*, 2016, 8, 8083-8090. **[Impact factor: 8.307]**

23. **A. Suwardi**, S. H. Lim, Y. Zheng, X. Wang, S. W. Chien, X. Y. Tan, Q. Zhu, L. M. N. Wong, J. Cao and W. Wang, *Journal of Materials Chemistry C*, 2020, 8, 16940-16948. [Impact factor: 8.067]
24. Zhu B, Su X, Shu S, Luo Y, Tan XY, Sun J, Sun D, Zhang H, Zhang Q, **Suwardi A<sup>✉</sup>**, Zheng Y. *ACS Applied Energy Materials*. 2022 Jan 31;5(2):2002-10. [Impact factor: 6.959]
25. Recatala-Gomez J<sup>#</sup>, **Suwardi A<sup>#</sup>**, Nandhakumar I, Abutaha A, Hippalgaonkar K. *ACS Applied Energy Materials*. 2020 Jan 29;3(3):2240-57. [Impact factor: 6.959]
26. Zheng J<sup>#</sup>, **Suwardi A<sup>#</sup>**, Wong CJ, Loh XJ, Li Z. *Nanoscale Advances*. 2021. [Impact factor: 5.598]
27. SFD Solco, XY Tan, D Zhang, J Cao, X Wang, Q Zhu, .. , **A. Suwardi<sup>✉</sup>**. *Journal of Materials Science* 2022: 1-10. [Impact factor: 4.682]
28. J. Cao, S. W. Chien, X. Y. Tan, C. K. I. Tan, Q. Zhu, J. Wu, X. Wang, Y. Zhao, L. Yang and **A. Suwardi<sup>✉</sup>**, *ChemNanoMat*, 2021, 7, 476-482. [Impact factor: 3.820]
29. W. Y. S. Lim, D. Zhang, S. S. F. Duran, X. Y. Tan, C. K. I. Tan, J. Xu and **A. Suwardi<sup>✉</sup>**, *Frontiers in Physics*, 2021, 683. [Impact factor: 3.718]
30. W. Y. S. Lim, D. Zhang, S. S. F. Duran, X. Y. Tan, C. K. I. Tan, J. Xu and **A. Suwardi<sup>✉</sup>**, *Frontiers in Materials*, 2021, 476. [Impact factor: 3.985]
31. SSF Duran, D Zhang, WYS Lim, J Cao, H Liu, Q Zhu, .. , **A. Suwardi<sup>✉</sup>**, *Crystals* 12, no. 3. 2022: 307. [Impact factor: 2.670]
32. D. Zhang, S.A. Sia, S.F.D. Solco, J. Xu, **A. Suwardi<sup>✉</sup>**, *Soft Science*, 2023; 3:1. <http://dx.doi.org/10.20517/ss.2022.29>
33. Duran SS, Lim WY, Cao J, Zhu Q, Tan CK, Liu H, **A. Suwardi<sup>✉</sup>**. Sulfide and Selenide Based Materials for Emerging Applications. 2022 Jan 1:267-93.
34. Repaka DV<sup>#</sup>, **Suwardi A<sup>#</sup>**, Kumar P. In Energy Saving Coating Materials 2020 Jan 1 (pp. 183-196). Elsevier.
35. Chua MH<sup>#</sup>, **Suwardi A<sup>#</sup>**, Xu J. Flexible Thermoelectric Polymers and Systems. 2022 Feb 14:81-116.

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## Co – authored Publications

1. Liu H, Dong Y, Galib M, Cai Z, Stan L, Zhang L, **A. Suwardi**, Wu J, Cao J, Tan CK, Sankaranarayanan SK. *Advanced Materials*. 2022 Jul 7:2203209. [Impact factor: 32.086]  
\* Highlighted by [Nature Review Materials](#).
2. F. Yang, J. Wu, **A. Suwardi**, Y. Zhao, B. Liang, J. Jiang, J. Xu, D. Chi, K. Hippalgaonkar and J. Lu, *Advanced Materials*, 2021, 33, 2004786. [Impact factor: 32.086]  
\* Selected for [inside front cover of the issue](#)
3. L. Hu, Y. Luo, Y. W. Fang, .. , **A. Suwardi**, H. Xie, J. Liu, J. Dong, A. Sanson and M. Giarola, *Advanced Energy Materials*, 2021, 11, 2100661. [Impact factor: 29.698]
4. Liu T, Xiang D, Ng HK, Han Z, Hippalgaonkar K, **A. Suwardi**, Martin J, Garaj S, Wu J. *Advanced Science*. 2022 May 1:2200816. [Impact factor: 17.521]  
\* Selected as [Front Cover](#)

5. L. Hu, Y.-W. Fang, F. Qin, ... **A. Suwardi**, X. Zhao, Y. Luo, D. V. M. Repaka, W. Luo, A. Suwardi and T. Soldi, *Nature communications*, 2021, 12, 1-10. **[Impact factor: 17.694]**
6. Wang N, Zhang W, Li Z, Wang S, **Suwardi A**, Ye E, Li B, Liu Y, Wu Z, Dong Y, Loh XJ. *Nano Energy*. 2022 Aug 28:107748. **[Impact factor: 19.069]**
7. Dong, Jinfeng, Yilin Jiang, Jiawei Liu, Jun Pei, Xian Yi Tan, Haihua Hu, **Suwardi A** et al. *Nano Energy* 103 (2022): 107809. **[Impact factor: 19.069]**
8. Deng T, Recatala-Gomez J, Ohnishi M, Repaka DM, Kumar P, **Suwardi A**, Abutaha A, Nandhakumar I, Biswas K, Sullivan MB, Wu G. *Materials Horizons*. 2021;8(9):2463-74. **[Impact factor: 15.717]**
9. Pei, Qing-Xiang, Jun-Yan Guo, **Suwardi A**, and Gang Zhang. *Materials Today Physics* 30 (2023): 100953. **[Impact factor: 11.021]**
10. Yang L, Chua XW, Yang Z, Ding X, Yu Y, **A. Suwardi**, Zhao M, Ke KL, Ehrler B, Di D. *Nanoscale Advances*. 2022;4(5):1318-23.
11. Wang X, Zheng Y, **Suwardi A**, Wu J, Teo SL, Zhu Q, Wu G, Xu J. *Materials Chemistry Frontiers*. 2022.
12. Wang X, Huang X, Wong ZM, **Suwardi A**, Zheng Y, Wei F, Wang S, Tan TL, Wu G, Zhu Q, Tanoto H. *ACS Applied Nano Materials*. 2022 Jun 15;5(6):8631-9.
13. Cao J, Meng TL, Zhang X, Tan CK, **Suwardi A**, Liu H. *Materials Today Electronics*. 2022 Jul 26:100005.
14. Tan XY, Dong JF, Jia N, Zhang HX, Ji R, **Suwardi A**, Li ZL, Zhu Q, Xu JW, Yan QY. *Rare Metals*. 2022 Sep;41(9):3027-34.
15. Liu H, Tan CK, Meng TL, Lin M, Lee CJ, Liu J, Zhang Z, Tan DC, Cao J, **Suwardi A**. *Journal of Materials Processing Technology*. 2022 Mar 1;301:117440.
16. Xu X, Yang J, Johnson W, Wang Y, **Suwardi A**, Ding J, Guan C, Zhang D. *Additive Manufacturing*. 2022 Jun 2:102939.
17. Lim WY, Cao J, **Suwardi A**, Meng TL, Tan CK, Liu H. *Journal of Adhesion Science and Technology*. 2022 Jun 10:1-23.
18. Wang S, Ong PJ, Liu S, Thitsartarn W, Tan MJ, **Suwardi A**, Zhu Q, Loh XJ. *Chemistry—An Asian Journal*. 2022 Jul 22:e202200608.
19. Soo XY, Png ZM, Chua MH, Yeo JC, Ong PJ, Wang S, Wang X, **Suwardi A**, Cao J, Chen Y, Yan Q. *Materials Today Advances*. 2022 Jun 1;14:100227.
20. Zhao Y, Zheng M, Wu J, Guan X, **Suwardi A**, Li Y, Lal M, Xie G, Zhang G, Zhang L, Thong JT. *Nanoscale*. 2021;13(26):11561-7.
21. Liu H, Tan CK, Meng TL, Teo SL, Liu J, Cao J, Wei Y, Tan DC, Lee CJ, **Suwardi A**, Lin M. *Corrosion Science*. 2021 Dec 1;193:109869.
22. Ong PJ, Png ZM, Soo XY, Wang X, **Suwardi A**, Chua MH, Xu JW, Zhu Q. *Materials Chemistry and Physics*. 2022 Feb 1;277:125438.
23. Recatala-Gomez J, Ng HK, Kumar P, **Suwardi A**, Zheng M, Asbahi M, Tripathy S, Nandhakumar I, Saifullah MS, Hippalgaonkar K. *ACS applied materials & interfaces*. 2020 Jul 7;12(30):33647-55.

24. Recatala-Gomez J, Kumar P, **Suwardi A**, Abutaha A, Nandhakumar I, Hippalgaonkar K. *Scientific reports*. 2020 Oct 21;10(1):1-0.
25. Png ZM, Soo XY, Chua MH, Ong PJ, **Suwardi A**, Tan CK, Xu J, Zhu Q. *Solar Energy*. 2022 Jan 1;231:115-28.
26. Zheng Y, Xie H, Zhang Q, **Suwardi A**, Cheng X, Zhang Y, Shu W, Wan X, Yang Z, Liu Z, Tang X. *ACS Applied Materials & Interfaces*. 2020 Jul 20;12(32):36186-95.
27. Ooi CC, **Suwardi A**, Ou Yang ZL, Xu G, Tan CK, Daniel D, Li H, Ge Z, Leong FY, Marimuthu K, Ng OT. *Physics of Fluids*. 2021 Aug 20;33(8):087118.
28. Zhu Q, Wang S, Wang X, **Suwardi A**, Chua MH, Soo XY, Xu J. *Nano-Micro Letters*. 2021 Dec;13(1):1-38.
29. Wang X, **Suwardi A**, Zheng Y, Zhou H, Chien SW, Xu J. *ACS Applied Nano Materials*. 2020 Sep 21;3(10):10156-65.
30. Qin F, Nikolaev SA, **Suwardi A**, Wood M, Zhu Y, Tan X, Aydemir U, Ren Y, Yan Q, Hu L, Snyder GJ. *Chemistry of Materials*. 2020 Nov 26;32(23):10130-9.
31. Wang X, **Suwardi A**, Lim SL, Wei F, Xu J. *npj Flexible Electronics*. 2020 Aug 10;4(1):1-9.
32. Tan LP, Sun T, Fan S, Ng LY, **Suwardi A**, Yan Q, Hng HH. *Nano Energy*. 2013 Jan 1;2(1):4-11.
33. Gogova D, **Suwardi A**, Kuznetsova YA, Zatsepin AF, Mochalov LA, Nezhdanov A, Szyszka B. *Int. J. of Advanced Applied Physics Research*. 2017 Jun 15;4(1):1-8.
34. Dinh KN, Sun Y, Pei Z, Yuan Z, **Suwardi A**, Huang Q, Liao X, Wang Z, Chen Y, Yan Q. *Small*. 2020 Apr;16(17):1905885.
35. MacManus-Driscoll J, **Suwardi A**, Kursumovic A, Bi Z, Tsai CF, Wang H, Jia Q, Lee OJ. *APL Materials*. 2015 Jun 1;3(6):062507.
36. Cho S, Jang JW, Zhang W, **Suwardi A**, Wang H, Wang D, MacManus-Driscoll JL. *Chemistry of Materials*. 2015 Oct 13;27(19):6635-41.
37. MacManus-Driscoll JL, **Suwardi A**, Wang H. *MRS bulletin*. 2015 Nov;40(11):933-42.
38. Ji W, Yao K, Lim YF, Liang YC, **Suwardi A**. *Applied Physics Letters*. 2013 Aug 5;103(6):062901.