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Employment

Lecturer
School of Mechanical and Aerospace Engineering
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Belfast, United Kingdom
01 Apr 2023 → present

Research outputs

Probing the Electrochemical Processes of Niobium Pentoxides (Nb 2 O 5) for High-Rate Lithium-ion Batteries: A Review
Lin, J., Zhao, S., Jervis, R. & Shearing, P., 15 Mar 2024, In: ChemElectroChem. 11, 6, 15 p., e202300581.

The enhanced dew-point evaporative cooling with a macro-roughened structure
Wu, K., Wang, S., Lin, J., Shao, Y., Gao, F. & Chua, K. J., Feb 2024, In: International Journal of Heat and Mass Transfer. 219, 18 p., 124898.

Dew-point evaporative cooling of PV panels for improved performance
Yang, C., Lin, J., Miksik, F., Miyazaki, T. & Thu, K., 05 Jan 2024, In: Applied Thermal Engineering. 236, Part C, 14 p., 121695.

A comprehensive review of the applications of hybrid evaporative cooling and solar energy source systems
Xue, T., Wan, Y., Huang, Z., Chen, P., Lin, J., Chen, W. & Liu, H., 16 Dec 2023, In: Sustainability. 15, 24, 26 p., 16907.

Recent advances of ionic liquids in zinc ion batteries: A bibliometric analysis
Su, C., Gao, X., Liu, K., He, A., He, H., Zhu, J., Liu, Y., Chen, Z., Zhao, Y., Zong, W., Dai, Y., Lin, J. & Dong, H., 12 Oct 2023, In: Green Energy and Intelligent Transportation. 2, 5, 16 p., 100126.

Advanced dew-point evaporative cooling systems
Lin, J. & Chua, K. J., 27 May 2023, *Indirect dew-point evaporative cooling: principles and applications.* Lin, J. & Chua, K. J. (eds.). Springer, p. 107–116 (Green Energy and Technology).

Engineering of dew-point evaporative coolers
Lin, J. & Chua, K. J., 27 May 2023, *Indirect dew-point evaporative cooling: principles and applications.* Lin, J. & Chua, K. J. (eds.). Springer, p. 25-52 (Green Energy and Technology).

Fundamental analysis of dew-point evaporative cooler
Lin, J. & Chua, K. J., 27 May 2023, *Indirect dew-point evaporative cooling: principles and applications.* Lin, J. & Chua, K. J. (eds.). Springer, p. 79-106 (Green Energy and Technology).

Modeling of dew-point evaporative coolers
Lin, J. & Chua, K. J., 27 May 2023, *Indirect dew-point evaporative cooling: principles and applications.* Lin, J. & Chua, K. J. (eds.). Springer, p. 53-77 (Green Energy and Technology).

State-of-the-art air-conditioning technologies
Lin, J. & Chua, K. J., 27 May 2023, *Indirect dew-point evaporative cooling: principles and applications.* Lin, J. & Chua, K. J. (eds.). Springer, p. 1–14 (Green Energy and Technology).

Working principles of evaporative cooling
Lin, J. & Chua, K. J., 27 May 2023, *Indirect dew-point evaporative cooling: principles and applications.* Lin, J. & Chua, K. J. (eds.). Springer, p. 15-24 (Green Energy and Technology).

Novel battery thermal management via scalable dew-point evaporative cooling
Lin, J., Chu, H. N., Thu, K., Wojtala, M., Gao, F. & Chua, K. J., 01 May 2023, In: Energy Conversion and Management. 283, 116948.

Numerical investigation of a novel tubular dew-point evaporative cooler
Gao, F., Thu, K., Wang, S., Zhao, F., Lin, J. & Wu, K., 25 Mar 2023, In: Applied Thermal Engineering. 223, 120064.

Modelling and experimental investigation of Nb2O5 as a high-rate battery anode material
Lin, J., Zhao, S., Tranter, T. G., Zhang, Z., Peng, F., Brett, D., Jervis, R. & Shearing, P. R., Mar 2023, In: Electrochimica Acta. 443, 141983.

Indirect Dew-Point Evaporative Cooling: Principles and Applications
Lin, J. & Chua, K. J., 2023, Springer. (Green Energy and Technology)

Performance and design analyses of various configurations of dew point evaporative cooling-based desiccant air-conditioning (DAC) systems for hot and humid conditions
Lao, M., Lin, J., Mikšík, F., Thu, K. & Miyazaki, T., Dec 2022, In: International Journal of Air-Conditioning and Refrigeration. 30, 1, 12.

The second law analysis of a humidification-dehumidification desalination system using M-cycle
Aziz, M. A., Lin, J., Mikšík, F., Miyazaki, T. & Thu, K., Aug 2022, In: Sustainable Energy Technologies and Assessments. 52, Part B, 102141.

On the performance improvement of an inverted Brayton Cycle using a regenerative heat and mass exchanger
Matsui, K., Lin, J., Thu, K. & Miyazaki, T., 15 Jun 2022, In: Energy. 249, 123726.

Multiscale coupling of surface temperature with solid diffusion in large lithium-ion pouch cells
Lin, J., Chu, H. N., Howey, D. A. & Monroe, C. W., 26 May 2022, In: Communications Engineering. 1, 1.

Anisotropic thermal characterisation of large-format lithium-ion pouch cells
Lin, J., Chu, H. N., Monroe, C. W. & Howey, D. A., May 2022, In: Batteries & Supercaps. 5, 5, e202100401.

A scalable dew-point evaporative cooler for battery thermal management
Lin, J., Chu, H. N., Thu, K., Wojtala, M., Gao, F. & Chua, K. J., 28 Mar 2022

Dual-encapsulated highly conductive and liquid-free phase change composites enabled by polyurethane/graphite nanoplatelets hybrid networks for efficient energy storage and thermal management
Wu, M., Li, T., Wang, P., Wu, S., Wang, R. & Lin, J., 02 Mar 2022, In: Small. 18, 9, 2105647.

Understanding the transient behavior of the dew point evaporative cooler from the first and second law of thermodynamics
Lin, J., Thu, K., Karthik, S., Shahzad, M. W., Wang, R. & Chua, K. J., 15 Sept 2021, In: Energy Conversion and Management. 244, 15 p., 114471.

Experimental and normalized sensitivity based numerical analyses of a novel humidifier-assisted highly efficient indirect evaporative cooler
Jamil, M. A., Xu, B. B., Dala, L., Sultan, M., Jie, L. & Shahzad, M. W., Jun 2021, In: International Communications in Heat and Mass Transfer. 125, 105327.

Thermal characterization of large-format li-ion pouch cells with transient cooling and lock-in thermography
Lin, J., Chu, H., Monroe, C. W. & Howey, D., 30 May 2021, In: ECS Meeting Abstracts. MA2021-01, 177.

A robust physics-based model framework of the dew point evaporative cooler: from fundamentals to applications
Lin, J., Shahzad, M. W., Li, J., Long, J., Li, C. & Chua, K. J., 01 Apr 2021, In: Energy Conversion and Management. 233, 13 p., 113925.

A spatiotemporal indirect evaporative cooler enabled by transiently interceding water mist
Shahzad, M. W., Lin, J., Xu, B. B., Dala, L., Chen, Q., Burhan, M., Sultan, M., Worek, W. & Ng, K. C., 15 Feb 2021, In: Energy. 217, 119352.

A fast 3D electrochemical/thermal model for large-format Li-ion pouch cells
Lin, J., Chu, H., Howey, D. & Monroe, C. W., 23 Nov 2020, In: ECS Meeting Abstracts. MA2020-02, 1601.

A Simplified Single-Layer Pseudo-4D Electrochemical/Thermal Model for Large-Format Li-Ion Pouch Cells
Lin, J., Chu, H. N., Howey, D. A. & Monroe, C. W., 01 May 2020, In: ECS Meeting Abstracts. MA2020-01 , 462.

An improved vehicle to the grid method with battery longevity management in a microgrid application
Yang, Q., Li, J., Cao, W., Li, S., Lin, J., Huo, D. & He, H., 01 May 2020, In: Energy. 198, 117374.

Towards a thermodynamically favorable dew point evaporative cooler via optimization
Lin, J., Wang, R., Li, C., Wang, S., Long, J. & Chua, K. J., 01 Jan 2020, In: Energy Conversion and Management. 203, 17 p., 112224.

On the in-depth scaling and dimensional analysis of a cross-flow membrane liquid desiccant dehumidifier
Lin, J., Huang, S-M., Wang, R. & Chua, K. J., 15 Sept 2019, In: Applied Energy. 250, p. 786-800

Scaling analysis of a li-ion pouch cell via a simplified electrochemical/thermal model
Lin, J., Chu, H. N., Howey, D. A. & Monroe, C. W., 30 Jul 2019, In: ECS Meeting Abstracts. MA2019-04, 180.

On the dimensional analysis of a cross-flow flat-plate membrane liquid desiccant dehumidifier
Lin, J., Huang, S., Wang, R. & Chua, K. J., 01 Feb 2019, In: Energy Procedia. 158, p. 1467-1472

On the exergy analysis of the counter-flow dew point evaporative cooler
Lin, J., Bui, D. T., Wang, R. & Chua, K. J., 15 Dec 2018, In: Energy. 165, Part B, p. 958-971

A new method for prediction and analysis of heat and mass transfer in the counter-flow dew point evaporative cooler under diverse climatic, operating and geometric conditions
Wan, Y., Lin, J., Chua, K. J. & Ren, C., Dec 2018, In: International Journal of Heat and Mass Transfer. 127, Part B, p. 1147-1160

The counter-flow dew point evaporative cooler: analyzing its transient and steady-state behavior
Lin, J., Bui, D. T., Wang, R. & Chua, K. J., Oct 2018, In: Applied Thermal Engineering. 143, p. 34-47

Similarity analysis and comparative study on the performance of counter-flow dew point evaporative coolers with experimental validation
Wan, Y., Lin, J., Chua, K. J. & Ren, C., Aug 2018, In: Energy Conversion and Management. p. 97-110

On the fundamental heat and mass transfer analysis of the counter-flow dew point evaporative cooler
Lin, J., Bui, D. T., Wang, R. & Chua, K. J., 01 May 2018, In: Applied Energy. 217, p. 126-142

The heat and mass transfer process of the counter-flow dew point evaporative cooler
Lin, J., Wang, R. & Chua, K. J., 31 Jan 2018, In: Energy Procedia. 142, p. 3805-3811

Thermodynamic analysis of a hybrid membrane liquid desiccant dehumidification and dew point evaporative cooling system
Lin, J., Huang, S-M., Wang, R. & Chua, K. J., 15 Jan 2018, In: Energy Conversion and Management. 156, p. 440-458

Investigation of dew point evaporative cooling with vacuum membrane dehumidification
Lin, J., Bui, D. T., Wang, R. & Chua, K. J., 31 Dec 2017, In: Energy Procedia. 142, p. 3851-3856

Multivariate scaling and dimensional analysis of the counter-flow dew point evaporative cooler
Lin, J., Wang, R. Z., Kumja, M., Bui, T. D. & Chua, K. J., Oct 2017, In: Energy Conversion and Management. 150, p. 172-187

Modelling and experimental investigation of the cross-flow dew point evaporative cooler with and without dehumidification
Lin, J., Wang, R. Z., Kumja, M., Bui, T. D. & Chua, K. J., 05 Jul 2017, In: Applied Thermal Engineering. 121, p. 1-13

Unsteady-state analysis of a counter-flow dew point evaporative cooling system
Lin, J., Thu, K., Bui, T. D., Wang, R. Z., Ng, K. C., Kumja, M. & Chua, K. J., 15 Oct 2016, In: Energy. 113, p. 172-185

Study on dew point evaporative cooling system with counter-flow configuration
Lin, J., Thu, K., Bui, T. D., Wang, R. Z., Ng, K. C. & Chua, K. J., 01 Feb 2016, In: Energy Conversion and Management. 109, p. 153-165

Activities

Frontiers in Energy Research (Journal)
Jie Lin (Peer reviewer)
Jun 2024 → Oct 2024

Energy Technology (Journal)
Jie Lin (Guest editor)
Sept 2023 → …

Green Energy and Intelligent Transportation (Journal)
Jie Lin (Guest editor)
Apr 2023 → …

University College London
Jie Lin (Visiting lecturer)
Apr 2023 → …

Energies (Journal)
Jie Lin (Guest editor)
Oct 2022 → …

Sustainability (Journal)
Jie Lin (Guest editor)
Oct 2022 → …

Chongqing University
Jie Lin (Visiting researcher)
May 2019 → Jun 2019

King Abdullah University of Science and Technology
Jie Lin (Visiting researcher)
Jan 2019 → Feb 2019

Prizes

QUB Agility Fund
Lin, Jie (Recipient), Oct 2023

STFC Futures Early Career Award
Lin, Jie (Recipient), Jan 2023

SEDA-PDF Supporting Learning Award
Lin, Jie (Recipient), Oct 2020

STFC Futures Early Career Award
Lin, Jie (Recipient), Nov 2019

Graduate Student Seminar Award
Lin, Jie (Recipient), Feb 2017

Innovation/Entrepreneurship Practicum Award
Lin, Jie (Recipient), Dec 2016