Stanford

John Cattermull

Postdoctoral Scholar, Materials Science and Engineering

Bio

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Committee member, RSC Energy Sector Interest Group (2021 - present)
- Associate member, Royal Society of Chemistry (2020 - present)
- Associate Fellow, Higher Education Academy (2023 - present)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Oxford (2024)
- Master of Science, University of Oxford (2020)

STANFORD ADVISORS

- William Chueh, Postdoctoral Faculty Sponsor
- Hemamala Karunadasa, Postdoctoral Research Mentor

LINKS

- Google Scholar: https://scholar.google.com/citations?hl=en&user=Uct8dVoAAAAJ
- Chueh Lab: https://chuehlab.stanford.edu
- Karunadasa Lab: https://web.stanford.edu/group/karunadasalab/

Publications

PUBLICATIONS

- **Nonequilibrium ion transport in a hybrid battery material.** *Science advances*
  Cattermull, J., Jagger, B., Cassidy, S. J., Dhir, S., Allan, P. K., Pasta, M., Goodwin, A. L.
  2026; 12 (24): eaed1629
- **Characterisation and modelling of potassium-ion batteries.** *Nature communications*
  Dhir, S., Cattermull, J., Jagger, B., Schart, M., Olbrich, L. F., Chen, Y., Zhao, J., Sada, K., Goodwin, A., Pasta, M.
  2024; 15 (1): 7580
- **Predicting Distortion Magnitudes in Prussian Blue Analogues** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Cattermull, J., Pasta, M., Goodwin, A. L.
  2023; 145 (45): 24471-24475
- **K-Ion Slides in Prussian Blue Analogues** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Cattermull, J., Roth, N., Cassidy, S. J., Pasta, M., Goodwin, A. L.
  2023; 145 (44): 24249-24259

- **Uncovering the Interplay of Competing Distortions in the Prussian Blue Analogue K₂Cu[Fe(CN)₆]** *CHEMISTRY OF MATERIALS*
  Cattermull, J., Sada, K., Hurlbutt, K., Cassidy, S. J., Pasta, M., Goodwin, A. L.
  2022; 34 (11): 5000-5008
- **Structural complexity in Prussian blue analogues** *MATERIALS HORIZONS*
  Cattermull, J., Pasta, M., Goodwin, A. L.
  2021; 8 (12): 3178-3186
- **Synthesis and Characterization of Li4(OH)3Br for Thermal Energy Storage.** *ACS applied energy materials*
  Milan, E., Quirk, J. A., Cattermull, J., Goodwin, A. L., Dawson, J. A., Pasta, M.
  2025; 8 (8): 5353-5359
- **Filling the Gaps in the LiBr-LiOH Phase Diagram: A Study on the High-Temperature Li3(OH)2Br Phase.** *Chemistry of materials : a publication of the American Chemical Society*
  Milan, E., Quirk, J. A., Hashi, K., Cattermull, J., Goodwin, A. L., Dawson, J. A., Pasta, M.
  2025; 37 (8): 2899-2906
- **Filling the Gaps in the LiBr-LiOH Phase Diagram: A Study on the High-Temperature Li₃(OH)₂Br Phase** *CHEMISTRY OF MATERIALS*
  Milan, E., Quirk, J. A., Hashi, K., Cattermull, J., Goodwin, A. L., Dawson, J. A., Pasta, M.
  2025
- **Synthesis and Characterization of Li₄(OH)₃Br for Thermal Energy Storage** *ACS APPLIED ENERGY MATERIALS*
  Milan, E., Quirk, J. A., Cattermull, J., Goodwin, A. L., Dawson, J. A., Pasta, M.
  2025
- **High-entropy sulfide argyrodite electrolytes for all-solid-state lithium-sulfur batteries** *CELL REPORTS PHYSICAL SCIENCE*
  Guo, H., Li, J., Burton, M., Cattermull, J., Liang, Y., Chart, Y., Rees, G. J., Aspinall, J., Pasta, M.
  2024; 5 (10)
- **Potassium Alloy Reference Electrodes for Potassium-Ion Batteries: The K-In and K-Bi Systems.** *ACS materials letters*
  Jagger, B., Aspinall, J., Kotakadi, S., Cattermull, J., Dhir, S., Pasta, M.
  2024; 6 (10): 4498-4506
- **Local Structure and Dynamics in MPt(CN)6 Prussian Blue Analogues.** *Chemistry of materials : a publication of the American Chemical Society*
  Harbourne, E. A., Barker, H., Guéroult, Q., Cattermull, J., Nagle-Cocco, L. A., Roth, N., Evans, J. S., Keen, D. A., Goodwin, A. L.
  2024; 36 (11): 5796-5804
- **On the Origin of the Non-Arrhenius Na-ion Conductivity in Na3OBr.** *Angewandte Chemie (Weinheim an der Bergstrasse, Germany)*
  Darminto, B., Rees, G. J., Cattermull, J., Hashi, K., Diaz-Lopez, M., Kuwata, N., Turrell, S. J., Milan, E., Chart, Y., Di Mino, C., Jeong Lee, H., Goodwin, A. L., Pasta, et al
  2023; 135 (51): e202314444
- **On the Origin of the Non-Arrhenius Na-ion Conductivity in Na₃OBr** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
  Darminto, B., Rees, G. J., Cattermull, J., Hashi, K., Diaz-Lopez, M., Kuwata, N., Turrell, S. J., Milan, E., Chart, Y., Di Mino, C., Jeong Lee, H., Goodwin, A. L., Pasta, et al
  2023; 62 (51): e202314444
- **Filling vacancies in a Prussian blue analogue using mechanochemical post-synthetic modification** *CHEMICAL COMMUNICATIONS*
  Cattermull, J., Wheeler, S., Hurlbutt, K., Pasta, M., Goodwin, A. L.
  2020; 56 (57): 7873-7876