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Date of Birth: 14 February 1993

Education and Qualifications

2018-2023	PHD DEGREE IN CHEMISTRY, DEPARTMENT OF CHEMISTRY, UNIVERSITY OF CAMBRIDGE Supervisor: Prof. Erwin Reisner Topic: 'Enhancing solar fuel synthesis via complementary approaches: round-the-clock operation and heat utilisation'	CAMBRIDGE, UK
2015-2017	MASTER'S DEGREE, GRADUATE SCHOOL OF SCIENCE, TOHOKU UNIVERSITY (GPA 3.79) Advisor: Prof. Hidetoshi Oikawa Topic: 'Photocatalytic functions of organic hybridised nanocrystal' (including 3 months Research Internship at Georgetown University, Washington, DC)	SENDAI, JAPAN
2011-2015	BACHELOR'S DEGREE, ADVANCED MOLECULAR CHEMISTRY, TOHOKU UNIVERSITY (GPA 3.67)	SENDAI, JAPAN
2006-2011	CHULALONGKORN UNIVERSITY DEMONSTRATION SECONDARY SCHOOL	BKK, THAILAND

Honours & Awards

SINCE 2018	SCHOLARSHIP RECIPIENT, UNIVERSITY OF CAMBRIDGE Cambridge Trust, and Trinity Henry-Barlow Scholarship	CAMBRIDGE, UK
2011-2017	SCHOLARSHIP RECIPIENT, TOHOKU UNIVERSITY 2011-2015: Advanced Molecular Chemistry Global 30 Scholarship (MEXT) 2015-2017: Program for Multi-dimensional Material Science Leaders (MEXT)	SENDAI, JAPAN
2016	JSAP YOUNG SCIENTIST PRESENTATION AWARD	YOKOHAMA, JAPAN

Selected Publications (citations: 239; H-index: 7)

- (1) C. Pornrungroj, M. Ozawa, T. Onodera, H. Oikawa, "A promising visible light-driven photocatalytic activity of conjugated polymer nanocrystals". *RSC Advances* **8**, 38773-38779 (2018). **(Q1, IF:4.0)**
- (2) C. Pornrungroj,[†] V. Andrei,[†] M. Rahaman, C. Uswachoke, H. J. Joyce, D. S. Wright, E. Reisner, "Bifunctional perovskite-BiVO₄ tandem devices for uninterrupted solar and electrocatalytic water splitting cycles", *Advanced Functional Materials* **31**, 2008182 (2021). **(T1, IF:19.9)**
- (3) Q. Wang,[†] C. Pornrungroj,[†] S. Linley, E. Reisner, "Strategies to improve light utilization in solar fuel synthesis", *Nature Energy*, **7**, 13-24 (2022). **(T1, IF:67.4)**
- (4) Q. Wang,[†] S. Kalathil,[†] C. Pornrungroj, C. D. Sahn, E. Reisner, "Bacteria-photocatalyst sheet for sustainable carbon capture and utilization", *Nature Catalysis* **5**, 633-642 (2022). **(T1, IF:40.71)**
- (5) V. Andrei,[†] G. M. Ucoski,[†] C. Pornrungroj, C. Uswachoke, Q. Wang, D. S. Achilleos, H. Kasap, K. P. Sokol, R. A. Jagt, H. Lu, T. Lawson, A. Wagner, S. D. Pike, D. S. Wright, R. L. Z. Hoyer, J. L. MacManus-Driscoll, H. J. Joyce, R. H. Friend, E. Reisner, "Floating perovskite-BiVO₄ devices for scalable solar fuel production", *Nature* **608**, 518-522 (2022). **(T1, IF:69.5)**
- (6) C. Pornrungroj,[†] V. Andrei,[†] E. Reisner, "Thermoelectric-photoelectrochemical water splitting under concentrated solar irradiation", *J. Am. Chem. Soc.*; **145**, 13709-13714 (2023). **(T1, IF:16.4)**
- (7) M. Rahaman, V. Andrei, D. S. Wright, E. Lam, C. Pornrungroj, S. Bhattacharjee, C. M. Pichler, H. F. Greer, J. J. Baumberg, E. Reisner, "Solar-driven liquid multicarbon fuel production using a standalone perovskite-BiVO₄ artificial leaf", *Nature Energy*; **8**, 629-638 (2023). **(T1, IF:67.4)**

[†]These authors contributed equally

Academic Experiences

2018-2020	ACADEMIC DEMONSTRATOR, DEPARTMENT OF CHEMISTRY, CAMBRIDGE UNIVERSITY Responsibility of teaching and grading lab courses to the undergraduates	CAMBRIDGE, UK
AUTUMN 2016	RESEARCH INTERN, DEPARTMENT OF PHYSICS, GEORGETOWN UNIVERSITY Work under the supervision of Dr. E. V. Keuran to develop MRI contrast agent.	WASHINGTON, D.C.
AUTUMN 2016	POSTER PRESENTER KJF INTERNATIONAL CONFERENCE	FUKUOKA, JAPAN
SUMMER 2015	INVITED SPEAKER, 64TH SPSJ SYMPOSIUM ON MACROMOLECULES	SENDAI, JAPAN
SPRING 2015	POSTER PRESENTER, 64TH SPSJ ANNUAL MEETING	SAPPORO, JAPAN
SPRING 2015	DELEGATE, THE CHILDREN & YOUTH FORUM AT THE THIRD UN WORLD CONFERENCE ON DISASTER RISK REDUCTION (3WCDDR)	SENDAI, JAPAN
SPRING 2014	MENTOR, GOOGLE SCIENCE FAIR IN TOHOKU	SENDAI, JAPAN

Leaderships & Non-Academic Experiences

SINCE 2021	PRESIDENT, DARWIN COLLEGE MAY BALL ORGANISING COMMITTEE	CAMBRIDGE, UK
2019-2021	EVENTS OFFICER, DARWIN COLLEGE STUDENTS ASSOCIATION	CAMBRIDGE, UK
2019-2021	POST-GRADUATE STUDENT REPRESENTATIVE, CAMBRIDGE THAI STUDENTS ASSOCIATION	CAMBRIDGE, UK
2016-2018	FOUNDER AND LICENSEE, TEDXTOHOKUUNIVERSITY	SENDAI, JAPAN
WINTER 2015	INTERNS, FUJISAKI DEPARTMENT STORE	SENDAI, JAPAN
2014-2016	STUDENT AMBASSADOR, SENDAI TOURISM, CONVENTION AND INTERNATIONAL ASSOCIATION.	SENDAI, JAPAN
2012-2017	TOHOKU UNIVERSITY FOREIGN STUDENTS ASSOCIATION Advisor 2015-2017, <u>President, 2014</u> , Vice president, 2013	SENDAI, JAPAN
2014-2015	PART-TIME, ENGLISH TEACHER, UP-SLOPE ENGLISH SCHOOL NPO	SENDAI, JAPAN
SPRING 2013	INTERN, PRANDA NORTH AMERICA INC.	RI, USA
2013-2014	TRUMPET PLAYER OF THE TOHOKU UNIVERSITY SYMPHONY ORCHESTRA CLUB	SENDAI, JAPAN
2012-2013	KUMON CRAM SCHOOL TEACHER	SENDAI, JAPAN
2009-2010	CHAIR AND FOUNDER OF ART FOR ALL 2 CLUB	BKK, THAILAND
2000-2010	VOLUNTEER, ART FOR ALL ANNUAL CAMPS	BKK, THAILAND
2008 SUMMER	PARTICIPATE IN SIAMYTH DRUM & BUGLE CORPS	BKK, THAILAND

Membership in Scientific Societies and Networks

2018-2020	OUTREACH COORDINATOR, UK SOLAR FUELS NETWORK	CAMBRIDGE, UK
SINCE 2018	ASSOCIATE MEMBER OF ROYAL CHEMICAL SOCIETY	CAMBRIDGE, UK

Languages

FLUENT IN ENGLISH (TOEFL ITP: 637), THAI (NATIVE), AND CONVERSATIONAL JAPANESE. CAN READ AND WRITE INTERMEDIATE LEVEL JAPANESE

Full Publication List

1. [C. Pornrungrroj](#),[†] A. B. M. Annuar,[†] Q. Wang, M. Rahaman, S. Bhattacharjee, V. Andrei, E. Reisner, "Hybrid photothermal-photocatalyst sheets for solar-driven overall water splitting coupled to clean water production from seawater and waste streams", *Nat. Water* **accepted**.
2. S. Bhattacharjee,[†] C. Guo,[†] E. Lam, J. M. Holstein M. R. Pereira, C. M. Pichler, [C. Pornrungrroj](#), M. Rahaman, T. Uekert, F. Hollfelder, E. Reisner, "Chemoenzymatic photoreforming: A sustainable approach for solar-fuel generation from plastic feedstocks", *J. Am. Chem. Soc.* **accepted**.
3. [C. Pornrungrroj](#),[†] V. Andrei,[†] E. Reisner, "Thermoelectric-photoelectrochemical water splitting under concentrated solar irradiation", *J. Am. Chem. Soc.*; **145**, 13709-13714 (2023).
4. M. Rahaman, V. Andrei, D. S. Wright, E. Lam, [C. Pornrungrroj](#), S. Bhattacharjee, C. M. Pichler, H. F. Greer, J. J. Baumberg, E. Reisner, "Solar-driven liquid multicarbon fuel production using a standalone perovskite-BiVO₄ artificial leaf", *Nature Energy*; **8**, 629-638 (2023).
5. S. Bhattacharjee,[†] M. Rahaman,[†] V. Andrei, M. Miller, S. Rodríguez-Jiménez, E. Lam, [C. Pornrungrroj](#), E. Reisner, "Solar-driven plastic reforming with CO₂-to-fuel conversion", *Nature Synthesis*; **2**, 182-192 (2023)
6. V. Andrei,[†] G. M. Ucoski,[†] [C. Pornrungrroj](#), C. Uswachoke, Q. Wang, D. S. Achilleos, H. Kasap, K. P. Sokol, R. A. Jagt, H. Lu, T. Lawson, A. Wagner, S. D. Pike, D. S. Wright, R. L. Z. Hoyer, J. L. MacManus-Driscoll, H. J. Joyce, R. H. Friend, E. Reisner, "Floating perovskite-BiVO₄ devices for scalable solar fuel production", *Nature* **608**, 518-522 (2022).
7. Q. Wang,[†] S. Kalathil,[†] [C. Pornrungrroj](#), C. D. Sahm, E. Reisner, Bacteria-photocatalyst sheet for sustainable carbon capture and utilization", *Nature Catalysis* **5**, 633-642 (2022).
8. S. Bhattacharjee, V. Andrei, [C. Pornrungrroj](#), M. Rahaman, C. M. Pichler, E. Reisner, "Reforming of soluble biomass and plastic derived waste using a bias-free Cu₃₀Pd₇₀|perovskite|Pt photoelectrochemical device", *Advanced Functional Materials* **32**, 2109313 (2022).
9. Q. Wang,[†] [C. Pornrungrroj](#),[†] S. Linley, E. Reisner, "Strategies to improve light utilization in solar fuel synthesis", *Nature Energy*, **7**, 13-24 (2022).
10. [C. Pornrungrroj](#),[†] V. Andrei,[†] M. Rahaman, C. Uswachoke, H. J. Joyce, D. S. Wright, E. Reisner, "Bifunctional perovskite-BiVO₄ tandem devices for uninterrupted solar and electrocatalytic water splitting cycles", *Advanced Functional Materials* **31**, 2008182 (2021).
11. M. Rahaman, V. Andrei, [C. Pornrungrroj](#), D. Wright, J. Baumberg, E. Reisner, "Selective CO production from aqueous CO₂ using a Cu₉₆In₄ catalyst and its integration into a bias-free solar perovskite-BiVO₄ tandem device", *Energy & Environmental Science* **13**, 3536-3543 (2020).
12. V. Dahanayake, [C. Pornrungrroj](#), M. Pablico-Lansigan, W. J. Hickling, T. Lyons, D. Lah, Y. C. Lee, E. Parasido, J. A. Bertke, C. Albanese, "Paramagnetic Clusters of Mn₃(O₂CCH₃)₆(Bpy)₂ in Polyacrylamide nanobeads as a new design approach to T₁-T₂ multi-modal MRI contrast agent". *ACS Applied Materials & Interfaces* **11**, 18153-18164 (2019)
13. [C. Pornrungrroj](#), T. Onodera, H. Oikawa, "PCBM nanoparticles as visible-light-driven photocatalysts for photocatalytic decomposition of organic dyes". *MRS Communication* **9**, 321-326 (2019).
14. E. V. Keuran, [C. Pornrungrroj](#), C. Fu, X. Zhang, S. Okada, H. Katsuyama, K. Kikuchi, T. Onodera, H. Oikawa, "Polydiacetylene ribbons formed using the controlled evaporative self-assembly (CESA) method" *MRS Communication* **9**, 229-235 (2019).
15. [C. Pornrungrroj](#), M. Ozawa, T. Onodera, H. Oikawa, "A promising visible light-driven photocatalytic activity of conjugated polymer nanocrystals". *RSC Advances* **8**, 38773-38779 (2018).

[†]These authors contributed equally