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Erwin Reisner

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Lab website: http://www-reisner.ch.cam.ac.uk/. Lab X handle: @ReisnerLab

Current academic positions

2024 – present Royal Academy of Engineering Chair in Emerging Technologies
2017 – present Professor of Energy & Sustainability, Department of Chemistry, University of Cambridge
2011 – present Fellow of St. John's College, Cambridge

Current entrepreneurial positions

2024 – present Co-Founder & Chief Scientific Officer, waste-to-fuel technology start-up, Protonera Ltd

Previous academic appointments

2015 – 2017 University Reader, Department of Chemistry, University of Cambridge
2012 – 2019 Director, Christian Doppler Laboratory for Sustainable SynGas Chemistry, Cambridge
2010 – 2024 College Lecturer, Organic Chemistry, St. John's College, Cambridge
2010 – 2015 University Lecturer, Department of Chemistry, University of Cambridge
2010 – 2015 EPSRC Career Acceleration Fellow, Department of Chemistry, University of Cambridge
2009 – 2010 EPSRC Career Acceleration Fellow, School of Chemistry, The University of Manchester, UK

Previous postdoc positions

2008 – 2009 BBSRC Research Associate, Inorganic Chemistry Laboratory, University Oxford, UK
Supervisor: Prof. Fraser A. Armstrong
2008 – 2009 College Lecturer, Inorganic Chemistry, St. John's College, Oxford, UK
2005 – 2007 Erwin Schrödinger Research Fellow, Massachusetts Institute of Technology, USA
Supervisor: Prof. Stephen J. Lippard

Education and degrees

2010 Habilitation (professorial qualification), Faculty of Chemistry, University of Vienna, Austria
Thesis Topic: 'Bio-inspired generation of sustainable energy carriers'
2002 – 2005 PhD with distinction (grade 1.0), Faculty of Chemistry, University of Vienna, Austria
(including 1-year research at Instituto Superior Técnico, Lisbon, Portugal)
Thesis Topic: 'Redox activated ruthenium anticancer drugs'
Supervisor: Prof. Bernhard K. Keppler
1998 – 2002 Diploma with distinction, 5-year programme with integrated BSc (grade 1.0) and MSc (grade 1.0), Faculty of Chemistry, University of Vienna, Austria
(including Erasmus exchange semester, New University of Lisbon, Portugal)

Awards

2024 Tilden Prize, Royal Society of Chemistry, UK
2023 Hughes Medal, Royal Society, UK
2022 Galvani Prize, The Bioelectrochemical Society, International
2018 Corday Morgan Prize, Royal Society of Chemistry, UK
2018 Lee Hsun Young Scientist Award, Chinese Academy of Science, Shenyang, China
2017 Japan Society of Coordination Chemistry International Award for Creative Work, Japan
2014 Harrison-Meldola Memorial Prize, Royal Society of Chemistry, UK
2014 Grammaticakis-Neumann Prize, Swiss Chemical Society, Switzerland
2014 Young Investigator Award, Royal Society of Chemistry Bioinorganic Group, UK
2011 'Science Award', Federal State of Upper Austria, Austria
2009 Anton-Paar Science Award, Austrian Chemical Society, Austria
2003 National Award for academic excellence (Würdigungspreis), Ministry of Science, Austria
2000 – 2004 University Awards for academic excellence, University of Vienna, Austria

Research Funding & Fellowships (>£1M)

Principal Investigator Grants:

- Source: Royal Academy of Engineering and UK Department of Science, Innovation & Technology
  Programme: Chair in Emerging Technologies
  Title: Solar-powered Upcycling of Biomass and Plastic Waste to Sustainable Chemicals
  Value: £2.5 million. Grant ID: CIET-2324-83. Duration: 2024-2034.
- Source: European Research Council (ERC) Advanced Grant (UKRI funded)
  Title: Semi-biological Domino Catalysis for Solar Chemical Synthesis
  Value: €2.5 million. Acronym: domino4chem. Grant ID: EP/X030563/1. Duration: 2023-2028.
- Source: European Union: FP7, Horizon 2020, UKRI underwrite; Marie Skłodowska-Curie Fellowships (16x)
  16 individual postdoctoral fellowships on solar chemistry projects
  Value: €4.5 million. Duration: 2013-2026.
- Source: European Research Council (ERC) Consolidator Grant (CoG) and Proof of Concept (PoC)
  Title CoG: Semi-artificial photosynthesis with wired enzymes (Acronym: MatEnSAP; Grant ID: 682833)
  Title PoC: Solar-driven reforming of waste into hydrogen (Acronym: SolReGen, Grant ID: 966581)
  Value: €2.15 million (€2M CoG, €0.15M PoC). Duration: 2016-2023.
- Source: United Kingdom Research & Innovation (UKRI)
  Title: Cambridge Circular Plastics Centre (Circular Economy Approaches to Eliminate Plastic Waste)
  Value: £1 million. Acronym: CirPlas. Grant ID: EP/S025308/1. Duration: 2019-2021.
- Source: Biotechnology & Biological Sciences Research Council (BBSRC)
  3 projects on biohybrids for solar chemistry; Grant IDs: BB/S00159X/1, BB/K010220/1, BB/J000124/1
  Value: £1 million. Duration: 2013-2023.
- Source: Christian Doppler Research Association and OMV Group, Austria
  Title: Christian Doppler Laboratory for Sustainable SynGas Chemistry
  Value: €2.3 million. Duration: 2012–2019.
- Source: EPSRC Career Acceleration Fellowship and EPSRC Research Leaders Award
  Title: Bio-inspired Solar Light Driven Hydrogen Production, Grant ID: EP/H00338X
  Value: £1 million. Duration: 2009-2015.

Co-Investigator Grants:

- Source: Engineering & Physical Sciences Research Council (EPSRC)
  Title: EPSRC Centre for Doctoral Training in Integrated Functional Nano (i4Nano)
  Value: £6.3 million. Grant ID: EP/S022953/1. Duration: 2019-2028
- Source: European Union, Horizon 2020, EU ITN Network
  Title: Solar chemicals for a sustainable Europe by hybrid molecule semiconductor devices
  Value: €4 million. Acronym: Solar2Chem. Grant ID: 861151. Duration: 2020-2024
- Source: European Union, Horizon 2020, EU FET OPEN
  Title: Soap Film based Artificial Photosynthesis
  Value: €3.2 million. Acronym: Sofia, Grant ID: 828838. Duration: 2019-2023
- Source: Engineering & Physical Sciences Research Council (EPSRC)
  Title: EPSRC Centre for Doctoral Training in Sustainable and Functional Nano
  Value: £4.6 million. Grant ID: EP/L015978/1. Duration: 2014-2023

Scientific and research leadership at the University of Cambridge (current only)

2019 – present Director (PI) of UKRI Cambridge Creative Circular Plastics Centre (CirPlas) https://www.energy.cam.ac.uk/Plastic_Waste
2014 – present Co-director (Co-I) of EPSRC Doctoral Training Centre for Nanotechnology https://www.nanodtc.cam.ac.uk/
2019 – present Member of EPSRC Centre for Doctoral Training in Automated Synthesis
2019 – present Steering Committee Member of Energy Interdisciplinary Research Centre
2017 – present Steering Committee Member of Global Challenges Strategic Research Initiative
2013 – present Selection Committee Member of Junior Research Fellowships, St. John's College
2012 – present Member (Cambridge lead) of Tohoku University (AIMR)–Cambridge Research Centre

International and national panel membership to support research excellence (recent only)

2019 – present Member (Co-I), EU ITN ETN consortium 'Solar2Chem'
2012 – present Member and providing support for EU and UK solar fuel and chemistry initiatives (AMPEA, Energy-X, Sunrise, Sunergy and Suner-C, Mission Innovation on Clean Energy)
2021 – present Committee on Interdisciplinary Research, Novo Nordisk Foundation, Denmark
2021 – present Advisory board, Fundamental Research Centre on Artificial Photosynthesis, China
2023 – 2024 Evaluation committee, Swedish Foundation for Strategic Research
2023 – 2024 Evaluation committee, Swiss Federal Office of Energy
2019 – 2023 Member (Co-I), EU FET OPEN consortium 'Soap Film Based Artificial Photosynthesis'
2022 – 2023 Evaluation committee, Polish Ministry of Science
2022 – 2023 Evaluation committee, Research Council of Norway
2019 – 2023 Scientific Advisory Board, Max Planck Institute of Colloids & Interfaces, Germany
2019, 2022 Evaluation committee, A*STAR, Singapore
2017 – 2021 Director, UK Solar Fuels Network (part of EPSRC SUPERGEN SuperSolar consortium)

Membership in scientific societies

2014 – present Fellow of the Royal Society of Chemistry (FRSC), UK (Member from 2008–2014)
2017 – present Member of the German Chemical Society (GdCh), Germany
2006 – present Member of the American Chemical Society, USA

International advisory board membership of scientific journals

2019 – present *Chemical Science*
2018 – present *Angewandte Chemie* (previously Kuratorium)
2011 – present *Chemical Communications*

Organisation and support of scientific meetings, colloquia and knowledge exchange

2023 Co-Chair, Biophotoelectrochemical Workshop, Cambridge, UK
2023 Theme committee member, IUPAC World Chemistry Congress, The Hague, The Netherlands
2021 Co-Chair, Royal Society of Chemistry Chemical Science Symposium (online)
2020 Co-organiser, 'Hybrids for Solar Fuel Generation' symposium, Pacifichem, USA (online)
2019 Chair, 3rd Faraday Discussions on Artificial Photosynthesis in Cambridge, UK
2019 Chair, 7th UK Solar Fuels Network Symposium in Cambridge, UK
2019 Co-Chair, nanoGE symposium on Solar Fuels in Berlin, Germany
2018 Co-organiser, Symposium at 43rd Int. Conference on Coordination Chemistry, Sendai, Japan
2016 Co-organiser, 4th UK Solar Fuels Network Symposium, Cambridge, UK
2016 Co-convener, 6th European Chemical Society (EuCheMS) Conference, Seville, Spain
2016 Organising committee, 1st Energy & Environmental Materials Forum, Gold Coast, Australia
2016 Co-organiser, 2nd UK-Japan Solar Fuels Symposium, Tokyo, Japan
2014 Co-organiser, 1st UK-Japan Solar Fuels Symposium, Tokyo, Japan
2013 Co-organiser, RSC 'Challenges in Chemical Renewable Energy' Conference, Cambridge, UK
2011 Co-organiser, RSC Workshop 'Solar Water Splitting', Boston, USA

2020 – present International Committee, Conference on Photochemical Conversion and Storage (IPS)
2013 – 2019 Organiser, Christian Doppler Lectures & Symposia, Cambridge, UK
2011 – 2014 Colloquium & Lord Lewis Lecture Organiser, Department of Chemistry, Cambridge, UK
2014 – 2017 Member, RSC Faraday Standing Committee on Conferences, London, UK

Presentations (Total: >330 lectures presented with >270 invited/keynote/plenary/named/award lectures)

Selected research presentations since 2022 (in person talks only):

Upcoming:

- *Plenary.* International Conference on Coordination Chemistry, Odense, Denmark
- *Plenary.* Conference on Sustainable Chemistry for Net Zero, St. Andrews, UK
- *Plenary.* 5th International solar fuels conference (ISF2025), Newcastle, UK
- *Plenary.* 7th International Symposium on Solar Fuels and Solar Cells, Dalian, China

Completed:

- *Keynote.* NanoSeries2024 Conference, University of Lisbon, Portugal
- *Distinguished lecture.* German Chemical Society & Barbara Mez-Starck Colloquium, University of Ulm, Germany
- *Plenary*. 22nd Cardiff Chemistry Conference, Cardiff, UK
- *Plenary.* 25th Netherlands' Catalysis and Chemistry Conference (N3C), Noordwijkerhout, The Netherlands
- *Keynote.* 244th Electrochemical Society (ECS) Meeting, Gothenburg, Sweden
- *Annual St. John's College Lecture.* University of Hull, UK
- *Keynote.* Sunlight- and Power-to-X conference, Uppsala University, Sweden
- *Plenary.* 8th International Conference on Semiconductor Photochemistry, Strasbourg, France
- *Plenary.* EuChemS European Inorganic Chemistry Conference (EICC), Vienna, Austria
- *Invited opening lecture.* 'Electrocatalysis Meets Organic Electrosynthesis' Summerschool, Interlaken, Switzerland
- *Gerhard Schmidt Lecture.* Faculty of Chemistry, Weizmann Institute of Science, Israel
- *Silliman Seminar in Inorganic Chemistry.* Department of Chemistry, Yale University, USA
- *Plenary.* 'Frontiers in renewable fuels and chemicals' symposium, Tarragona (ICIQ), Spain
- *Invited.* Sungkyun International Solar Forum (SISF 2022), Seoul, South Korea
- *Invited.* Department of Chemistry and Applied Biosciences, ETH Zürich, Switzerland
- *Keynote.* SolTech 2022 Conference, Munich, Germany
- *Plenary.* Annual Meeting of German Catalysis Society, Weimer, Germany
- *Plenary.* 38th Biennial Meeting of the Spanish Royal Society of Chemistry (RSEQ), Granada, Spain
- *Plenary.* 4th Small Molecule Activation conference, Cancun, Mexico
- *Galvani Prize Lecture.* 27th International Symposium on Bioelectrochemistry & Bioenergectics, Antwerp, Belgium
- *Plenary.* RSC Chemical Nanoscience and Nanotechnology Annual Symposium, London, UK

International EIC Horizon Prize 'Fuel from the Sun: Artificial Photosynthesis' competition (£5M)

- Coordinator of Cambridge team that demonstrated a prototype solar-powered reactor ('artificial leaves') for direct CO_2 to syngas conversion in Joint Research Centre in Ispra (Italy) in 2022. Joint 2nd prize. Video: https://www.youtube.com/watch?v=rLad1mkHY6o

Outreach

I coordinate events, often with my team, and give lectures to explain my science to the public. My engagements range from visits to local schools, inviting children to the chemistry department, presenting at the Cambridge Science Festival or Pint of Science Festival as well as reaching out to alumni. We showcase scientific experiments to make science widely accessible and understood.

Online resources include:

- News public outreach: https://tinyurl.com/ub9hauj and https://tinyurl.com/uzxu8xmc
- Videos: http://www-reisner.ch.cam.ac.uk/videos.html
- Press articles about our work: http://www-reisner.ch.cam.ac.uk/press.html
- Cambridge Festival: http://www-reisner.ch.cam.ac.uk/CamFest.html

Selected outreach presentations in Cambridge (UK) since 2022 (in person talks only):

- *Primary School Lecture with Experiments.* Newham Croft Primary School (Year 6, age: 10 years)
- *Secondary School Lecture with Experiments.* Parkside Community College (Year 10, age: 14 years)
- *Student Society Lecture.* Kelvin Club, Peterhouse College
- *Student Society Lecture.* Churchill Science Society, Churchill College
- *Student Society Lecture.* Cambridge University Chemistry Society
- *Student Society Lecture.* Cambridge University Scientific Society
- *Public Lecture.* Pint of Science Festival, Panton Arms
- *Public Lecture with Device Display.* Cambridge Festival
- *Alumni Lecture.* St. John's College
- *Alumni Lecture with Device Display.* Yusuf Hamied Department of Chemistry

Publications

http://www-reisner.ch.cam.ac.uk/publications.html
Total: 233 peer-reviewed journal publications & 6 patents. ORCID: 0000-0002-7781-1616
Citation metrics (google scholar source: here): H-index, 88; citation rate, >3'500 pa; total citations, >22'000.

List of Peer-Reviewed Publications

[number] unnamed co-authors, *corresponding authors

Publications as Principal Investigator in Cambridge

233. Robertson, Zhang, **Reisner**, Butt & Jeuken* *Chem. Sci.*, **2024**, accepted
"Engineering of bespoke photosensitiser–microbe interfaces for enhanced semi-artificial photosynthesis"

232. Bonke, Trezza, Bergamasco, [3], Chiavazzo* & **Reisner*** *J. Am. Chem. Soc.,* **2024**, *146*, 15648–58
"Optimization of Self-Assembled Photocatalytic CO2 Reduction Performance Using Machine Learning Algorithms"

231. Pan, Dai, [14], **Reisner,** [2], Hagfeldt*, Grätzel* & Stranks* *Nature*, **2024**, 628, 765–70
"High carrier mobility along the [111] orientation in Cu_2O photoelectrodes"

230. Kim, Bhattacharjee, Lam, Casadevall, Rodríguez-Jiménez & **Reisner*** *Small*, **2024**, accepted
"Photocatalytic CO_2 reduction using homogeneous carbon dots with a molecular cobalt catalyst"

229. Liu, Pulignani, Webb, Cobb, Rodríguez-Jiménez, [2] & **Reisner*** *Chem. Sci.,* **2024**, 6088–94
"Electrostatic [FeFe]-hydrogenase–carbon nitride assemblies for efficient solar hydrogen production"

228. Sun, Bhattacharjee, Xiao*, Li, [4], **Reisner**, MacManus-Driscoll* *J. Mater. Chem. C*, **2024**, 12, 4779–91
"Low-temperature open-atmosphere growth of WO_3 thin films with tunable and high-performance photoresponse"

227. Seif-Eddine, Cobb, Dang, Abdiaziz, Bajada, **Reisner** & Roessler* *Nature Chem.*, **2024**, *16*, 1015–23
"Operando film-electrochemical EPR spectroscopy tracks radical intermediates in surface-immobilized catalysts"

226. Bhattacharjee, Linley & **Reisner*** *Nature Rev. Chem.,* **2024**, *8,* 87-105
"Solar reforming as an emerging technology for circular chemical industries"

225. Cobb, Rodríguez-Jiménez & **Reisner*** *Angew. Chem. Int. Ed.,* **2024**, *63*, e202310547
"Connecting Biological and Synthetic Approaches for Electrocatalytic CO_2 Reduction"

224. Rodríguez-Jiménez, Lam, Bhattacharjee & **Reisner*** *Green Chem.,* **2023,** 25, 10611–21
"Valorisation of lignocellulose and low concentration CO_2 using fractionation–photocatalysis–electrolysis process"

223. Pornrungroj, Annuar, Wang, [2], Andrei & **Reisner*** *Nature Water*, **2023**, *1*, 952–60
"Hybrid photothermal-photocatalyst sheets for solar-driven overall water splitting coupled to water purification"

222. Bhattacharjee, Guo, Lam, [6], Hollfelder* & **Reisner*** *J. Am. Chem. Soc.,* **2023**, *145*, 20355–64
"Chemoenzymatic Photoreforming: A Sustainable Approach for Solar Fuel Generation from Plastic Feedstocks"

221. Casadevall, Lage, Mu, Greer, [4], García-Melchor* & **Reisner*** *Nanoscale*, **2023**, 15, 15775-15784
"Size-dependent activity of carbon dots for photocatalytic H_2 generation with a molecular Ni cocatalyst"

220. Bonchio, Bonin*, [4], **Reisner**, Sarkar, Toma & Robert* *Nature Catal.*, **2023**, *6*, 657–65
"Best practices for experiments and reporting in photocatalytic CO_2 reduction"

219. Fang, Rahaman, Bharti, **Reisner**, Robert, Ozin & Hu* *Nature Rev. Methods Primers*, **2023**, *3*, 61
"Photocatalytic CO_2 reduction"

218. Zhang, Casadevall, [2], Butt*, **Reisner*** & Jeuken* *Adv. Funct. Mater.*, **2023**, *33*, 202302204.
"Rational Design of Covalent Multiheme Cytochrome-Carbon Dot Biohybrids for Photoinduced Electron Transfer"

217. Lawson, Gentleman, [3], Petit, Frosz, **Reisner*** & Euser* *ACS Catal.*, **2023**, *13*, 2300077
"Low-Volume Reaction Monitoring of Carbon Dot Light Absorbers in Optofluidic Microreactors"

216. Kar, Rahaman, Andrei, Bhattacharjee, Roy & **Reisner*** *Joule*, **2023**, *7*, 1496–514
"Integrated capture and solar-driven utilization of CO_2 from flue gas and air"

215. Pornrungroj, Andrei & **Reisner*** *J. Am. Chem. Soc.*, **2023**, *145*, 13709–14
"Thermoelectric–Photoelectrochemical Water Splitting under Concentrated Solar Irradiation"

214. Galushchinski, Pulignani, Szalad, **Reisner**, [4], Savateev* & Antonietti *Solar RRL*, **2023**, *7*, 2300077
"Heterostructured PHI-PTI/Li^+Cl^- Carbon Nitrides for Multiple Photocatalytic Applications"

213. Rahaman, Andrei, Wright, [5], Baumberg & **Reisner*** *Nature Energy*, **2023**, *8*, 629–38
"Solar-driven liquid multicarbon fuel production using a standalone perovskite-$BiVO_4$ artificial leaf"

212. Linley & **Reisner*** *Adv. Sci.*, **2023**, *10*, 2207314
"Floating Carbon Nitride Composites for Practical Solar Reforming of Pre-Treated Wastes to Hydrogen Gas"

211. Cobb, Dharani, Oliveira, Pereira & **Reisner*** *Angew. Chem. Int. Ed.*, **2023**, *62*, e202218782
"Carboxysome-Inspired Electrocatalysis using Enzymes for the Reduction of CO_2 at Low Concentrations"

210. Baikie, [3], **Reisner**, [3], Schnedermann*, Rao* & Zhang* *Nature*, **2023**, *615*, 836–40
"Photosynthesis re-wired on the pico-second timescale"

209. Lam, Miller, Linley, Manuel, Pereira & **Reisner*** *Angew. Chem. Int. Ed.*, **2023**, *62*, e202215894
"Comproportionation of CO_2 and Cellulose to Formate Using a Floating TiO_2-Enzyme Photocatalyst"

208. Bhattacharjee, Rahaman, Andrei, [3] Pornrungroj & **Reisner*** *Nature Synth.*, **2023**, *2*, 182–92
"Photoelectrochemical CO_2-to-fuel conversion with simultaneous plastic reforming"

207. Osorio, Shalvey, Banerji, Saeed, [5], **Reisner**, Major* & Cowan* *Chem. Commun.*, **2023**, *59*, 944–47
"Hybrid photocathode based on Ni molecular catalyst and Sb_2Se_3 for solar H_2 production"

206. Lawson, Gentleman, Pinnell, [3], **Reisner*** & Euser* *Angew. Chem. Int. Ed.*, **2023**, *62*, e202214788
"In-situ detection of cobaloxime intermediates during photocatalysis using photonic crystal fiber microreactors"

205. Andrei, Wang, Uekert, Bhattacharjee & **Reisner*** *Acc. Chem. Res.*, **2022**, *55*, 3376–86
"Solar panel technologies for light-to-chemical conversion"

204. Pichler, Bhattacharjee, Lam, Su, [4], Rahaman & **Reisner*** *ACS Catal.*, **2022**, *12*, 13360–71
"Bio-electrocatalytic conversion of food waste to ethylene via succinic acid as the central intermediate"

203. Pulignani, Mesa, [2], Giménez*, Durrant* & **Reisner*** *Angew. Chem. Int. Ed.*, **2022**, *61*, e202211587
"Rational design of carbon nitride photoelectrodes with high activity toward organic oxidations"

202. Jenner, Crack, [4], **Reisner**, [2], Cheesman* & Butt* *J. Am. Chem. Soc.*, **2022**, *144*, 18296–304
"Reaction of thiosulfate dehydrogenase with a substrate mimic gives insights into the mechanism of catalysis"

201. Kalathil, Miller & **Reisner*** *Angew. Chem. Int. Ed.*, **2022**, *61*, e202211057
"Microbial fermentation of PET plastic waste for the production of chemicals or electricity"

200. Gentleman, Lawson, Ellis, [5] **Reisner**, Cresswell* & Euser* *Chem. Commun.*, **2022**, *58*, 10548–51
"Stern–Volmer analysis of photocatalyst fluorescence within hollow-core photonic crystal fibre microreactors"

199. Andrei, Ucoski, Pornrungroj, Uswachoke, Wang, [12], Friend & **Reisner*** *Nature*, **2022**, *608*, 518–22
"Floating perovskite-$BiVO_4$ devices for scalable solar fuel production"

198. Piper, Casadevall, **Reisner**, [2], Gates & Butt* *Angew. Chem. Int. Ed.*, **2022**, *61*, e202210572
"Photocatalytic removal of the greenhouse gas nitrous oxide by liposomal microreactors"

197. Badiani, Casadevall, Miller, [2], Pereira & **Reisner*** *J. Am. Chem. Soc.*, **2022**, 144, 14207–16
"Engineering electro- and photocatalytic carbon materials for CO_2 reduction by formate dehydrogenase"

196. Wang, Kalathil, Pornrungroj, Sahm & **Reisner*** *Nature Catal.*, **2022**, *5*, 633–41
"Bacteria–photocatalyst sheet for sustainable carbon dioxide utilization"

195. Li, Vijeta, Casadevall, Gentleman, Euser & **Reisner*** *ACS Catal.*, **2022**, *12*, 8155–63
"Bridging plastic recycling and photocatalysis: deconstruction of polystyrene via a C–H oxidation pathway"

194. Andrei, Jagt, Rahaman, [2], MacManus-Driscoll*, Hoye* & **Reisner*** *Nature Mater.*, **2022**, *21*, 864–68
"Long-term solar water and CO_2 splitting with photoelectrochemical BiOI–$BiVO_4$ tandems"

193. Rodríguez-Jiménez, Song, [6] Hammarström* & **Reisner*** *J. Am. Chem. Soc.*, **2022**, 144, 9399–412
"Self-assembled liposomes enhance electron transfer for efficient photocatalytic CO_2 reduction"

192. Bozal-Ginesta, [8], **Reisner**, Brudvig, Wang & Durrant* *J. Am. Chem. Soc.*, **2022**, *144*, 8454–59
"Spectroelectrochemistry of water oxidation kinetics in molecular versus heterogeneous oxide Ir electrocatalysts"

191. Riesgo-Gonzalez, Bhattacharjee, [4], Grey, **Reisner*** & Wright* *Inorg. Chem.*, **2022**, *61*, 6223–33
"Single-source deposition of MO_x films containing Zr and 3d transition metals for catalytic water oxidation"

190. Sahm, Ciotti, Mates-Torres, [4] Garcia-Melchor* & **Reisner*** *Chem. Sci.*, **2022**, *13*, 5988–98
"Tuning the local chemical environment of ZnSe with dithiols towards photocatalytic CO_2 reduction"

189. Vijeta, Casadevall & **Reisner*** *Angew. Chem. Int. Ed.*, **2022**, *61*, e202203176
"An integrated carbon nitride-nickel photocatalyst for the amination of aryl halides using sodium azide"

188. Cobb, Badiani, Dharani, Wagner, [2], Pereira & **Reisner*** *Nature Chem.*, **2022**, *14*, 417–24
"Fast CO_2 hydration kinetics impair heterogeneous but improve enzymatic CO_2 reduction catalysis"

187. Edwardes Moore, Cobb, [2] Pereira & **Reisner*** *Proc. Natl. Acad. Sci. U.S.A.*, **2022**, *119*, e2114097119
"Understanding the local chemical environment of bioelectrocatalysis"

186. Badiani, Cobb, Wagner, Oliveira, Zacarias, Pereira & **Reisner***, *ACS Catal.*, **2022**, *12*, 1886–97
"Elucidating film loss and the role of H-bonding of adsorbed redox enzymes by electrochemical QCM analysis"

185. Antón García, Edwardes Moore, Bajada, [4], Warnan* & **Reisner***, *Nature Synth.*, **2022**, *1*, 77–86
"Photoelectrochemical hybrid cell for unbiased CO_2 reduction coupled to alcohol oxidation"

184. Wang, Pornrungroj, Linley & **Reisner*** *Nature Energy*, **2022**, 7, 13–24
"Strategies to improve light utilization in solar fuel synthesis"

183. Bhattacharjee, Andrei, [2], Pichler & **Reisner*** *Adv. Funct. Mater.,* **2022**, *32*, 2109313
"Reforming of biomass and plastic waste using a bias-free $Cu_{30}Pd_{70}$|perovskite|Pt photoelectrochemical device"

182. Klein, Rodríguez-Jiménez, [5], **Reisner**, Brouwer, Bonnet* *Chem. Eur. J.,* **2021**, *27*, 17203–12
"Shorter alkyl chains enhance diffusion and electron transfer between dye and catalysts in liposomes"

181. Wen, Wan, Vijeta, Casadevall, Buglioni, **Reisner*** & Noel* *ChemSusChem.,* **2021**, *14*, 5265–70
"Photocatalytic C–H azolation of arenes using heterogeneous carbon nitride in batch and flow"

180. Tanentzap*, Cottingham, Fonvielle, Riley, [4], **Reisner** & Lebreton *PLoS Biol.,* **2021**, *19*, e3001389
"Microplastics and anthropogenic fibre concentrations in lakes reflect surrounding land use"

179. Edwardes Moore, Andrei, [2], Pereira & **Reisner*** *Angew. Chem. Int. Ed.*, **2021**, *60*, 26303–07
"Semi-artificial photoelectrochemical tandem leaf with a CO_2-to-formate efficiency approaching 1%"

178. Lam & **Reisner***, *Angew. Chem. Int. Ed.* **2021**, *60*, 23306–12
"TiO_2-Co(terpyridine)$_2$ photocatalyst for oxidation of cellulose to formate coupled to reduction of CO_2 to syngas"

177. Sahm, Ucoski, Roy & **Reisner*** *ACS Catal.,* **2021**, *11*, 11266–77
"Automated, continuous-flow platform to analyze semiconductor–metal complex systems for CO_2 reduction"

176. Piper, Edwards, van Wonderen, [3], **Reisner**, Clarke* & Butt* *Front. Microbiol.,* **2021**, *12*, 714508.
"Bespoke biomolecular wires for electron transfer: assembly of a functionalized multiheme electron conduit"

175. Pichler, Bhattacharjee, Rahaman, Uekert & **Reisner***, *ACS Catal.*, **2021**, *11*, 9159–67
"Conversion of polyethylene to hydrocarbons via integrated tandem chemical–photo/electrocatalytic processes"

174. Sahm, [7], Hammarström*, Garcia-Melchor* & **Reisner*** *Chem. Sci.,* **2021**, *12*, 9078–87
"Imidazolium-modification enhances photocatalytic CO_2 reduction on ZnSe quantum dots"

173. Pannwitz, Klein, [3] **Reisner***, Hammarström* & Bonnet*, *Chem. Soc. Rev.,* **2021**, *50*, 4833–55
"Roadmap towards solar fuel synthesis at the water interface of liposome membranes"

172. Wright, Lin, Berta, [2], Readman, Rosta*, **Reisner*** & Baumberg* *Nature Catal.,* **2021**, *4*, 157–63
"Mechanistic study of immobilized molecular catalyst by in situ gap-plasmon-assisted spectro-electrochemistry"

171. Vijeta, Casadevall, Roy & **Reisner*** *Angew. Chem. Int. Ed.,* **2021**, *60*, 8494–99
"Visible-light promoted C–O bond formation with a carbon nitride-nickel heterogeneous photocatalyst"

170. Roy, Miller, Warnan, Leung, Sahm & **Reisner*** *ACS Catal.,* **2021**, *11*, 1868–76
"Electrocatalytic and solar-driven reduction of CO_2 with cobalt phthalocyanine–metal oxide hybrid materials"

169. Pornrungroj, Andrei, Rahaman, [2], Wright & **Reisner*** *Adv. Funct. Mater.*, **2021**, *31*, 2008182
"Bifunctional perovskite-$BiVO_4$ tandem devices for uninterrupted solar and electrocatalytic water splitting cycles"

168. Koehler, Lawson, Neises, Willkomm, [7], **Reisner** & Euser* *Anal. Chem.,* **2021**, *93*, 895–901
"Optofluidic photonic crystal fiber microreactors for in situ studies of carbon nanodot-driven photoreduction"

167. Uekert, Pichler, Schubert & **Reisner*** *Nature Sustain.*, **2021**, *4*, 383–91
"Solar-driven reforming of solid waste for a sustainable future"

166. Bozal Ginesta, Mesa, Eisenschmidt, Francàs, [5], **Reisner*** & Durrant* *Chem. Sci.,* **2021**, *12*, 946–59
"Charge accumulation kinetics in multi-redox molecular catalysts immobilised on TiO_2"

165. Uekert, Bajada, Schubert, Pichler & **Reisner*** *ChemSusChem.,* **2021**, *14*, 4190–97
"Scalable photocatalyst panels for photoreforming of plastic, biomass and mixed waste in flow"

164. Wagner, Sahm, & Reisner* *Nature Catal.,* **2020**, *3*, 775–86
"Towards molecular understanding of local chemical environment effects in catalytic CO_2 reduction"

163. Antón García, Warnan & **Reisner*** *Chem. Sci.,* **2020**, *11*, 12769–76
"A diketopyrrolopyrrole dye-based dyad on a porous TiO_2 photoanode for solar-driven water oxidation"

162. Wang, Warnan, Rodríguez-Jiménez, Leung, [2], Domen & **Reisner*** *Nature Energy,* **2020**, *5*, 703–10
"Molecularly engineered photocatalyst sheet for scalable solar formate production from CO_2 and water"

161. Rahaman, Andrei, [2], Baumberg & **Reisner*** *Energy Environ. Sci.,* **2020**, *13*, 3536–43
'Selective CO production from CO_2 using a $Cu_{96}In_4$ catalyst and integration into a solar perovskite-$BiVO_4$ device'

160. Achilleos, Yang, Kasap, [2], Durrant* & **Reisner*** *Angew. Chem. Int. Ed.,* **2020**, *59*, 18184–88
"Solar reforming of biomass with homogeneous carbon dots"

159. Robinson, Bassegoda, Blaza, **Reisner*** & Hirst* *J. Am. Chem. Soc.,* **2020**, *142*, 12226–36
"Understanding C-H bond cleavage affecting formate oxidation by a Mo-dependent formate dehydrogenase"

158. Warnan* & **Reisner*** *Angew. Chem. Int. Ed.,* **2020**, *59*, 17344–54
"Synthetic organic design for solar fuel systems"

157. Fang, Kalathil & **Reisner*** *Chem. Soc. Rev.,* **2020**, *49*, 4926–52
"Semi-biological approaches to solar-to-chemical conversion"

156. McCune, Kuehnel, **Reisner** & Scherman* *Chem,* **2020**, *6*, 1819–30
"Stimulus-mediated ultrastable radical formation"

155. Li, Edwards*, Blake, [3], Sokol, **Reisner**, Wonderen, Clarke* & Butt* *Nanotechnol.,* **2020**, *31*, 354002
"His/Met heme ligation in PioA cytochrome enabling electron transfer by Rhodopseudomonas palustris TIE-1"

154. Uekert, Dorchies, Pichler & **Reisner*** *Green Chem.,* **2020**, *22*, 3262–71
"Photoreforming of food waste into value-added products over visible-light-absorbing catalysts"

153. Jenkinson, Wagner, Kornienko, **Reisner** & Wheatley* *Adv. Funct. Mater.*, **2020**, *30*, 1202002633.
"One-pot route to faceted FePt-Fe_3O_4 dumbbells: probing morphology–catalytic activity effects in O_2 reduction"

152. Pichler, Uekert & **Reisner*** *Chem. Commun.*, **2020**, *56*, 5743–46
"Photoreforming of biomass in metal salt hydrate solutions"

151. Bajada, Roy, Warnan, [2], Roessler & **Reisner*** *Angew. Chem. Int. Ed.,* **2020**, *132*, 15763–71
"A precious-metal-free hybrid electrolyzer for alcohol oxidation coupled to CO_2-to-syngas conversion"

150. Achilleos, Kasap & **Reisner*** *Green Chem.,* **2020**, *22*, 2831–39
"Photocatalytic hydrogen generation coupled to pollutant utilization using carbon dots produced from biomass"

149. Heidary, Kornienko, Kalathil, Fang, Ly, Greer & **Reisner*** *J. Am. Chem. Soc.,* **2020**, *142*, 5194–203
"Disparity of cytochrome utilization in extracellular electron transfer pathways of Geobacter sulfurreducens"

148. Fang, Kalathil, Divitini, Wang & **Reisner***, *Proc. Natl. Acad. Sci. U.S.A.,* **2020,** *117*, 5074–80
"A 3D hybrid electrode with electroactive microbes for efficient electrogenesis and chemical synthesis"

147. Bajada, Vijeta, Savateev, Zhang, Howe & **Reisner*** *ACS Appl. Mater. Interfaces,* **2020,** *12*, 8176–82
"Visible light flow reactor packed with porous carbon nitride for aerobic substrate oxidations"

146. Zhang* & **Reisner*** *Nature Rev. Chem.*, **2020**, *4*, 6–21
"Advancing photosystem II photoelectrochemistry for semi-artificial photosynthesis"

145. Edwardes Moore, Andrei, Zacarias, Pereira, & **Reisner*** *ACS Energy Lett.,* **2020**, 5, 232–37
"Integration of a hydrogenase in a lead halide perovskite photoelectrode for tandem solar water splitting"

144. Wagner, Ly, Heidary, Szabo, Foeldes, [9], Scherman* & **Reisner*** *ACS Catal.,* **2020**, *10*, 751–761
"Host-guest chemistry meets electrocatalysis: Cucurbit[6]uril on a Au surface as hybrid system in CO_2 reduction"

143. Andrei, Reuillard & **Reisner*** *Nature Mater.*, **2020**, *19*, 189–94
"Bias-free syngas production by integrating a molecular cobalt catalyst with perovskite–$BiVO_4$ tandems"

142. Mesa, Francas, [7], **Reisner**, Grätzel, Batista* & Durrant* *Nature Chem.*, **2020**, *12*, 82–89
"Multihole water oxidation catalysis on photoanodes revealed by operando spectroelectrochemistry and DFT"

141. Vijeta & **Reisner** *Chem. Commun.,* **2019**, *55*, 14007–10
"Carbon nitride as heterogeneous visible-light photocatalyst for Minisci reaction and coupling to H_2 production"

140. Sokol, Robinson, [5], Hirst, Pereira & **Reisner*** *J. Am. Chem. Soc.*, **2019**, *141,* 17498–502
"Reversible & selective conversion of H_2 and CO_2 into formate by a semi-artificial formate hydrogenlyase mimic"

139. Creissen, Warnan, Anton Garcia, Farre, Odobel & **Reisner*** *ACS Catal.*, **2019**, *9,* 9530–38
"Inverse Opal $CuCrO_2$ Photocathodes for H_2 Production Using Organic Dyes and a Molecular Ni Catalyst"

138. Jenner, Kurth, [2], **Reisner**, Dahl, Bradley, Butt & Cheesman* *J. Biol. Chem.*, **2019**, *294, 18002*–14
"Heme ligation and redox chemistry in two bacterial thiosulfate dehydrogenase (TsdA) enzymes"

137. Uekert, Kasap & **Reisner*** *J. Am. Chem. Soc.*, **2019**, *141*, 15201–10
"Photoreforming of Nonrecyclable Plastic Waste over a Carbon Nitride/Nickel Phosphide Catalyst"

136. Roy & **Reisner*** *Angew. Chem. Int. Ed.*, **2019**, *58*, 12180–84
"Visible-Light CO_2 Reduction by Mesoporous Carbon Nitride Modified with Polymeric Cobalt Phthalocyanine"

135. Yang, Godin, [4], Steier, **Reisner** & Durrant* *J. Am. Chem. Soc.*, **2019**, *141*, 11219–29
"Electron Accumulation Induces Efficiency Bottleneck for H_2 Production in Carbon Nitride Photocatalysts"

134. Ren, Achilleos, [4], **Reisner** & Petit* *J. Phys. Chem. Lett.*, **2019**, *10*, 3843–48
"Uncovering Charge Transfer between Carbon Dots and Water by In Situ Soft X-ray Absorption Spectroscopy"

133. Abdiaziz, Salvadori, Sokol, **Reisner** & Roessler* *Chem. Commun.*, **2019**, *55*, 8840–43
"Protein film electrochemical EPR spectroscopy as a technique to investigate redox reactions in biomolecules"

132. Kornienko, Ly, Robinson, Heidary, Zhang & **Reisner*** *Acc. Chem. Res.*, **2019**, *52*, 1439–48
"Advancing Techniques for Investigating the Enzyme–Electrode Interface"

131. Leung, Vigil, Warnan, Edwardes Moore & **Reisner*** *Angew. Chem. Int. Ed.*, **2019**, *58*, 7697–701
"Rational Design of Polymers for Selective CO_2 Reduction Catalysis"

130. Leung, Warnan, Ly, Heidary, Nam, Kuehnel & **Reisner*** *Nature Catal.*, **2019**, *2*, 354–65
"Solar-driven reduction of aqueous CO_2 with a cobalt bis(terpyridine)-based photocathode"

129. Kuehnel, Creissen, Sahm, [2], Orchard & **Reisner*** *Angew. Chem. Int. Ed.*, **2019**, *58*, 5059–63
"ZnSe Nanorods as Visible-Light Absorbers for Photocatalytic and Photoelectrochemical H_2 Evolution in Water"

128. Miller, Robinson, Oliveira, [4], Pereira & **Reisner*** *Angew. Chem. Int. Ed.*, **2019**, *58*, 4601–05
"Interfacing Formate Dehydrogenase with Metal Oxides for Electrocatalysis & Solar-Driven Reduction of CO_2"

127. **Reisner*** *Angew. Chem. Int. Ed.*, **2019**, *58*, 3656–57
"When Does Organic Photoredox Catalysis Meet Artificial Photosynthesis?"

126. Fang, Sokol, Heidary, Kandiel, Zhang & **Reisner*** *Nano Lett.*, **2019**, *19*, 1844–50
"Structure–Activity Relationships of 3D Electrodes with Photosystem II for Semiartificial Photosynthesis"

125. Dalle, Warnan, Leung, Reuillard, Karmel & **Reisner*** *Chem. Rev.*, **2019**, *119*, 2752–875
"Electro- and Solar-Driven Fuel Synthesis with First Row Transition Metal Complexes"

124. Warnan, Willkomm, Farre, Pellegrin, Boujtita,* Odobel* & **Reisner*** *Chem. Sci.*, **2019**, *10*, 2758–66
"Solar electricity and fuel production with perylene monoimide dye-sensitised TiO_2 in water"

123. Vanicek, Jochriem, [5], Winter*, **Reisner*** & Bildstein* *Organometallics*, **2019**, *38*, 1361–71
"Redox-Rich Metallocene Tetrazene Complexes: Synthesis, Structure, Electrochemistry, and Catalysis"

122. Tetzlaff, Simon, Achilleos, [6], **Reisner**, Marschall* & Apfel* *Faraday Discuss.*, **2019**, *215*, 216–26
"$Fe_xNi_{9-x}S_8$ (x = 3–6) as potential photocatalysts for solar-driven hydrogen production?"

121. Stikane, Hwang, [2], Critchley, Butt*, **Reisner*** & Jeuken* *Faraday Discuss.*, **2019**, *215*, 26–38
"Towards compartmentalized photocatalysis: multihaem proteins as transmembrane electron conduits"

120. Kornienko, Zhang, [4], Rutherford* & **Reisner*** *J. Am. Chem. Soc.*, **2018**, *140*, 17923–31
"Oxygenic photoreactivity in Photosystem II studied by rotating ring disk electrochemistry"

119. Kornienko, Zhang, Sakimoto, Yang* & **Reisner*** *Nature Nanotech.*, **2018**, *13*, 890–99
"Interfacing nature's catalytic machinery with synthetic materials for semi-artificial photosynthesis"

118. Sokol, Robinson, Warnan, [3], Zhang & **Reisner*** *Nature Energy*, **2018**, *3*, 944–51
"Bias-free water splitting with photosystem II on a dye-sensitized photoanode wired to hydrogenase"

117. Sokol, Robinson, [3], Ruff, Pereira & **Reisner*** *J. Am. Chem. Soc.*, **2018**, *140*, 16418–22
"Tandem Photoreduction of CO_2 with a Formate Dehydrogenase Driven by Photosystem II"

116. Kasap, Achilleos, Huang & **Reisner*** *J. Am. Chem. Soc.*, **2018**, *140*, 11604–07
"Photoreforming of lignocellulose into H_2 using nanoengineered carbon nitride under benign conditions"

115. Lu, Andrei, Jenkinson, [4], **Reisner***, Wright* & Pike* *Adv. Mater.*, **2018**, *30*, 1804033
"Single-source Bi polyoxovanadate precursors for the scalable synthesis of doped $BiVO_4$ photoanodes"

114. Uekert, Kuehnel*, Wakerley & **Reisner*** *Energy Environ. Sci.*, **2018**, *11*, 2853–57
"Plastic waste as a feedstock for solar-driven H_2 production"

113. Kasap, Godin, Jeay-Bizot, Achilleos, Fang, Durrant & **Reisner*** *ACS Catalysis*, **2018**, *9*, 6914–26
"Interfacial engineering of a carbon nitride-graphene oxide-molecular Ni catalyst hybrid"

112. Nam, Zhang, Andrei, Kornienko, [8], Park & **Reisner*** *Angew. Chem. Int. Ed.*, **2018**, *57*, 10595–99
"Solar water splitting with a hydrogenase integrated in photoelectrochemical tandem cells"

111. Andrei, Hoye, [3], De Volder, Friend & **Reisner*** *Adv. Energy Mater.*, **2018**, *8*, 1801403
"Scalable triple cation mixed halide perovskite-BiVO4 tandems for bias-free water splitting"

110. Rosser, Hisatomi, [2], Minegishi, **Reisner*** & Domen* *Chem. Eur. J.*, **2018**, *24*, 18393–97
"$La_5Ti_2Cu_{0.9}Ag_{0.1}S_5O_7$ modified with a molecular Ni catalyst for photoelectrochemical H_2 generation"

109 Wakerley, Ly, Kornienko, Orchard, Kuehnel & **Reisner*** *Chem. Eur. J.*, **2018**, *24*, 18385–88
"Aerobic conditions enhance the photocatalytic stability of CdS/CdO_x quantum dots"

108. Kornienko, Heidary, Cibin & **Reisner*** *Chem. Sci.*, **2018**, *9*, 5322–33
"Catalysis by design: a bifunctional water splitting catalyst developed through in operando measurements"

107. Li, Subramanian, Matthews, [2], Rosser, **Reisner**, Luo* & Wright* *Dalton Trans.*, **2018**, *47*, 5679–86
"Energy transfer and photoluminescence of lanthanide-polyoxotitanate cages coordinated by salicylate ligands"

106. Kuehnel, Sahm, Neri, Lee, Orchard, Cowan* & **Reisner*** *Chem. Sci.*, **2018**, *9*, 2501–09
"ZnSe quantum dots modified with a Ni(cyclam) catalyst for efficient visible-light driven CO_2 reduction"

105. Willkomm & **Reisner*** *Bull. Jpn. Soc. Coord. Chem.*, **2018**, *71*, 18–29
"Photo- and electrocatalytic H_2 evolution with cobalt oxime complexes"

104. Kuehnel* & **Reisner*** *Angew. Chem. Int. Ed.*, **2018**, *57*, 3290–96
"Solar hydrogen generation from lignocellulose"

103. Creissen, Warnan & **Reisner*** *Chem. Sci.*, **2018**, *9*, 1439–47
"Solar H_2 generation with a $CuCrO_2$ photocathode modified with an organic dye and molecular Ni catalyst"

102. Zhang, Bombelli, Sokol, Fantuzzi, Rutherford, Howe & **Reisner*** *J. Am. Chem. Soc.*, **2018**, *140*, 6–9
"Photoelectrochemistry of photosystem II in vitro vs. in vivo"

101. Rowe, Le Gall, Ainsworth, [7], Clarke, Jeuken*, **Reisner*** & Butt* *ACS Catal.*, **2017**, *7*, 7558–66
"Light-driven H_2-evolution and C=C or C=O bond hydrogenation by shewanella oneidensis"

100. Reuillard, Ly, Rosser, Kuehnel, Zebger & **Reisner*** *J. Am. Chem. Soc.*, **2017**, *139*, 14425–35
"Tuning product selectivity for aqueous CO_2 reduction with an immobilized Mn(bipyridine)-pyrene catalyst"

99. Orchard, Hojo, Sokol, Chan, Asao, Adschiri* & **Reisner*** *Chem. Commun.*, **2017**, *53*, 12638–41
"Catechol–TiO_2 hybrids for photocatalytic H_2 production and photocathode assembly"

98. Robinson, Bassegoda, **Reisner*** & Hirst* *J. Am. Chem. Soc.*, **2017**, *139*, 9927–36
"Oxidation state-dependent binding properties of the active site in a Mo-containing formate dehydrogenase"

97. Hutton, Martindale & **Reisner*** *Chem. Soc. Rev.*, **2017**, *46*, 6111–23
"Carbon dots as photosensitisers for solar-driven catalysis"

96. Kuehnel, Orchard, Dalle & **Reisner*** *J. Am. Chem. Soc.*, **2017**, *139*, 7217–23
"Selective photocatalytic CO_2 reduction in H_2O through anchoring of a molecular Ni catalyst on CdS nanocrystals"

95. Leung, Warnan, Nam, Zhang, Willkomm & **Reisner*** *Chem. Sci.*, **2017**, *8*, 5172–80
"Photoelectrocatalytic H_2 Evolution with Molecular Catalysts on p-Si via a Stabilising Mesoporous TiO_2 Interlayer"

94. Martindale, Hutton, Caputo, [1], Godin, Durrant & **Reisner*** *Angew. Chem. Int. Ed.*, **2017**, *56*, 6459–63
"Enhancing Performance in Carbon Dots Through Graphitization and Core Nitrogen Doping"

93. Crespo-Quesada & **Reisner*** *Energy Environ. Sci.*, **2017**, *10*, 1116–27
"Emerging Approaches to Stabilise Photocorrodible Electrodes and Catalysts for Solar Fuel Applications"

92. Hwang, Orchard, Hojo, [3], Butt*, Reisner* & Jeuken* *ChemElectroChem*, **2017**, *4*, 1959–68
"Exploring step-by-step assembly of nanoparticle:cytochrome biohybrid photoanodes"

91. Rosser & **Reisner*** *ACS Catalysis*, **2017**, *7*, 3131–41
"Understanding immobilized molecular catalysts through UV/vis spectroelectrochemistry"

90. Wakerley, Kuehnel, Orchard, Ly, Rosser & **Reisner*** *Nature Energy*, **2017**, *2*, 17021
"Solar-driven reforming of lignocellulose to H_2 with a CdS/CdO_x photocatalyst"

89. Reuillard, Ly, Hildebrandt, Jeuken*, Butt* & **Reisner*** *J. Am. Chem. Soc.*, **2017**, *139*, 3324–27
"High Performance Reduction of H_2O_2 with a Decaheme Cytochrome on a Porous ITO Electrode"

88. Warnan, Willkomm, Ng, Godin, Prantl, Durrant & **Reisner*** *Chem. Sci.*, **2017**, *8*, 3070–79
"Solar H_2 evolution with modified diketopyrrolopyrrole dyes immobilised on Co and Ni catalyst-TiO_2 hybrids"

87. Abdellah, El-Zohry, Antila, Windle, **Reisner** & Hammarström* *J. Am. Chem. Soc.*, **2017**, *139*, 1226–32
"Time-Resolved IR Spectroscopy Reveals TiO_2 as a Reversible Electron Acceptor in a TiO_2–Re Catalyst System"

86. Lau, Klose, Kasap, [2], **Reisner***, Jeschke* & Lotsch* *Angew. Chem. Int. Ed.*, **2017**, *56*, 510–14
"Dark photocatalysis: Storage of solar energy in carbon nitride for time-delayed hydrogen production"

85. Hutton, Reuillard, Martindale Caputo, Butt & **Reisner*** *J. Am. Chem. Soc.*, **2016**, *138*, 16722–16730
"Carbon Dots as Versatile Photosensitizers for Solar-Driven Catalysis with Redox Enzymes"

84. Ainsworth, Lockwood, White, [5], Jeuken*, **Reisner*** & Butt* *ChemBioChem*, **2016**, *17*, 2324–33
"Photoreduction of Extracellular Cytochromes by Organic Chromophores and Dye-Sensitized TiO_2"

83. Zhang, Paul, Sokol, Romero, van Grondelle & **Reisner*** *Nature Chem. Biol.*, **2016**, *12*, 1046–52
"Competing charge transfer pathways at the photosystem II-electrode interface"

82. Crespo-Quesada, Pazos-Outón, Warnan, Kuehnel, Friend & **Reisner*** *Nature Commun.*, **2016**, *7*, 12555
"Metal-encapsulated organolead halide perovskite photocathode for solar-driven hydrogen evolution in water"

81. Sokol, Mersch, Hartmann, [5], Plumeré* & **Reisner*** *Energy Environ. Sci.*, **2016**, *9*, 3698–709
"Rational wiring of photosystem II to hierarchical indium tin oxide electrodes using redox polymers"

80. Kasap, Caputo, Martindale, Godin, [2], Durrant* & **Reisner*** *J. Am. Chem. Soc.*, **2016**, *138*, 9183–92
"Solar-driven Reduction of Protons Coupled to Alcohol Oxidation with Carbon Nitride-Molecular Ni System"

79. Martindale, Joliat, Bachmann, Alberto & **Reisner*** *Angew. Chem. Int. Ed.*, **2016**, *55*, 9402–06
"Clean Donor Oxidation Enhances H_2 Evolution Activity of Carbon Quantum Dot-Molecular Catalyst Photosystem"

78. Kandiel, Hutton & **Reisner*** *Catal. Sci. Technol.*, **2016**, *6*, 6536-41
"Visible Light Driven Hydrogen Evolution with a Noble Metal Free $CuGa_2In_3S_8$ Nanoparticle System in Water"

77. Gross, Creissen, Orchard & **Reisner*** *Chem. Sci.*, **2016**, *7*, 5537–46
"Photoelectrochemical H_2 production in water using a layer-by-layer assembly of a Ru dye and Ni catalyst on NiO"

76. Lee, Reuillard, Sokol, [5], Jeuken*, Butt* & **Reisner*** *Chem. Commun.*, **2016**, *52*, 7390–93
"A Decahaem Cytochrome as Electron Conduit in Protein-Enzyme Redox Processes"

75. Rosser, Windle & **Reisner*** *Angew. Chem. Int. Ed.*, **2016**, *55*, 7388–92
"Electrocatalytic and Solar-driven CO_2 Reduction to CO with a Molecular Mn Catalyst on Mesoporous TiO_2"

74. Lee, Park, Fontecilla-Camps & **Reisner*** *Angew. Chem. Int. Ed.*, **2016**, *55*, 5971–74
"Photoelectrochemical H_2 Evolution with a Hydrogenase Immobilized on a TiO_2-protected Silicon Electrode"

73. Rosser, Gross, Lai & **Reisner*** *Chem. Sci.*, **2016**, *7*, 4024–35
"Precious-metal free photoelectrochemical water splitting with immobilised molecular Ni and Fe redox catalysts"

72. Reuillard, Warnan, Leung, Wakerley & **Reisner*** *Angew. Chem. Int. Ed*., **2016**, *55*, 3952–57
"Poly(cobaloxime)/Carbon Nanotube Electrode: Freestanding Buckypaper with Polymer-Enhanced H_2 Evolution"

71. Martindale & **Reisner*** *Adv. Energy Mater.*, **2016**, *6*, 1502095
"Bi-functional Fe-electrodes for efficient water splitting with enhanced stability through in-situ regeneration"

70. Chang, Orchard, Martindale & **Reisner*** *J. Mat. Chem. A* **2016**, *4*, 2856–62
"Ligand Removal from CdS Quantum Dots for Enhanced Photocatalytic H_2 Generation Performance"

69. Willkomm, Orchard, Reynal,* Pastor, Durrant & **Reisner*** *Chem. Soc. Rev*., **2016**, *45*, 9–23
"Dye-sensitised semiconductors modified with molecular catalysts for light-driven H_2 production"

68. Lai, Palm & **Reisner*** *Adv. Energy Mater*., **2015**, *5*, 1501668
"Multi-functional Coatings from Single Source Precursor Chemistry in Photoelectrochemical Water Splitting"

67. Wombwell, Caputo & **Reisner*** *Acc. Chem. Res*., **2015**, *48*, 2858–65
"[NiFeSe]-Hydrogenase Chemistry"

66. Caputo, Wang, Beranek & **Reisner*** *Chem. Sci.* **2015**, *6*, 5690–94
"Carbon Nitride-TiO_2 Hybrid Modified with Hydrogenase for Visible Light Driven Hydrogen Production"

65. Mersch, Lee, Zhang, [2], Rutherford & **Reisner*** *J. Am. Chem. Soc*. **2015**, *137*, 8541–49
"Wiring of Photosystem II to Hydrogenase for Photoelectrochemical Water Splitting"

64. Kuehnel, Wakerley, Orchard & **Reisner*** *Angew. Chem. Int. Ed.* **2015**, *54*, 9627–31
"Photocatalytic Formic Acid Conversion on CdS Nanocrystals with Controllable Selectivity for H_2 or CO"

63. Windle & **Reisner*** *Chimia* **2015**, *69*, 435–41
"Heterogenised Molecular Catalysts for CO_2 Conversion"

62. Wakerley & **Reisner*** *Energy Environ. Sci.* **2015**, *8*, 2283–95
"Oxygen Tolerant Proton Reduction Catalysis: Much O_2 about Nothing?"

61. Reynal,* Pastor, Gross, Selim, **Reisner*** & Durrant*, *Chem. Sci.*, **2015**, *6*, 4855–59
"Unravelling the pH-dependence of a molecular photocatalytic system for hydrogen production"

60. Martindale, Hutton, Caputo & **Reisner*** *J. Am. Chem. Soc*., **2015**, *137*, 6018–25
"Solar Hydrogen Production Using Carbon Quantum Dots and a Molecular Nickel Catalyst"

59. Wombwell & **Reisner*** *Chem. Eur. J*., **2015**, *21*, 8096–104
"Synthetic Active Site Model of the [NiFeSe] Hydrogenase"

58. Hwang, [9], **Reisner**,* Butt* & Jeuken* *Adv. Funct. Mater*., **2015**, *25*, 2308–15
"A Decaheme Cytochrome as a Molecular Electron Conduit in Dye-Sensitized Photoanodes"

57. Willkomm, Muresan & **Reisner*** *Chem. Sci*., **2015**, *6*, 2727–36
"Enhancing H_2 Evolution Performance of an Immobilised Cobalt Catalyst by Rational Ligand Design"

56. Lai, Park, Zhang, Matthews, Wright & **Reisner*** *Chem. Eur. J*., **2015**, *21*, 3919–23
"A Si Photocathode Protected and Activated with a Ti and Ni Composite Film for Solar Hydrogen Production"

55. Windle, Pastor, Reynal,* [2], Durrant, Perutz* & **Reisner*** *Chem. Eur. J*., **2015**, *21*, 3746–54
"Improving the Photo-reduction of CO_2 to CO through Immobilization of a Molecular Re Catalyst on TiO_2"

54. Wakerley, Gross & **Reisner*** *Chem. Commun*., **2014**, *50*, 15995–98
"Proton Reduction by Molecular Catalysts in Water under Demanding Atmospheres"

53. Bassegoda, Madden, Wakerley, **Reisner*** & Hirst* *J. Am. Chem. Soc*., **2014**, *136*, 15473–76
"Reversible Interconversion of CO_2 and Formate by a Molybdenum-containing Formate Dehydrogenase"

52. Reynal,* Willkomm, Muresan, [2], **Reisner*** & Durrant* *Chem. Commun*., **2014**, *50*, 12768–71
"Distance Dependent Charge Separation & Recombination in Semiconductor/Catalyst Systems for Water Splitting"

51. Park, Lee & **Reisner*** *Phys. Chem. Chem. Phys*., **2014**, *16*, 22462–65
"Photoelectrochemical Reduction of Aqueous Protons With CuO|$CuBi_2O_4$ under Visible Light Irradiation"

50. Caputo, Gross, Lau, Cavazza, Lotsch & **Reisner*** *Angew. Chem. Int. Ed*., **2014**, *53*, 11538–42
"Photocatalytic H_2 Production using Carbon Nitride with a Hydrogenase and a Bioinspired Ni Catalyst"

49. Lai, Kato, Mersch & **Reisner*** *Faraday Discuss.,* **2014**, *176,* 199–211
"Comparison of Photoelectrochemical Water Oxidation Activity of a Synthetic Photocatalyst with Photosystem II"

48. Lin, Mersch, Jefferson & **Reisner*** *Chem. Sci.*, **2014**, *5*, 4906–13
"Cobalt Sulphide Microtube Array as Cathode in Photoelectrochemical Water Splitting with Photoanodes"
47. Dumanli,* [3], **Reisner**, Steiner & Vignolini* *ACS Appl. Mater. Interfaces*, **2014**, *6*, 12302–06
"Digital color in cellulose nanocrystal films"
46. Zhang, Lin, Valev, **Reisner**,* Steiner & Baumberg* *Small*, **2014**, *10*, 3970–78
"Plasmonic Enhancement in $BiVO_4$ Photonic Crystals for Efficient Water Splitting"
45. Kato, Zhang, Paul & **Reisner*** *Chem. Soc. Rev.*, **2014**, *43*, 6485–97
"Protein Film Photoelectrochemistry of the Water Oxidation Enzyme Photosystem II"
44. Zhang, **Reisner*** & Baumberg* *Energy Environ. Sci.*, **2014**, *7*, 1402–08
"Al-doped ZnO Inverse Opal Networks as Electron Collectors in $BiVO_4$ Photoanodes for Solar Water Oxidation"
43. Wakerley & **Reisner*** *Phys. Chem. Chem. Phys.*, **2014**, *16*, 5739–46
"Development and Understanding of Cobaloxime Activity through Electrochemical Molecular Catalyst Screening"
42. Gross, Reynal,* Durrant & **Reisner*** *J. Am. Chem. Soc.*, **2014**, *136*, 356–66
"Versatile Photocatalytic Systems for H_2 Generation in Water Based on an Efficient DuBois-type Nickel Catalyst"
41. Wombwell & **Reisner*** *Dalton Trans.*, **2014**, *43*, 4483–93
"Synthesis, Structure and Reactivity of Ni Site Models of [NiFeSe]-Hydrogenases"
40. Sakai, Mersch & **Reisner*** *Angew. Chem. Int. Ed.*, **2013**, *52*, 12313–16
"Photocatalytic Hydrogen Evolution with a Hydrogenase in a Mediator-Free System under High Levels of O_2"
39. Scherer, Muresan, Steiner* & **Reisner*** *Chem. Commun.*, **2013**, *49*, 10453–55
"RYB Tri-Colour Electrochromism based on a Molecular Cobaloxime"
38. Lai, Kato, King, Wright & **Reisner*** *Chem. Eur. J.*, **2013**, *19*, 12943–47
"Assembly of a Photoelectrode for Water Oxidation by Deposition of a Ti and Ni-containing Precursor on WO_3"
37. Kato, Cardona, Rutherford & **Reisner*** *J. Am. Chem. Soc.*, **2013**, *135*, 10610–13
"Covalent Immobilization of Oriented Photosystem II on a Nanostructured Electrode for Solar Water Oxidation"
36. Reynal, Lakadamyali, Gross, **Reisner** & Durrant* *Energy Environ. Sci.*, **2013**, *6*, 3291–300
"Parameters Affecting Electron Transfer Dynamics from Semiconductor to Catalyst for Photoreduction of Protons"
35. Lai, Lin, Lv, King, Steiner, [2], Wright & **Reisner*** *Chem. Commun.*, **2013**, *49*, 4331–33
"Facile Assembly of an Efficient CoO_x Water Oxidation Catalyst from Co-containing Polyoxotitanate Nanocages"
34. Muresan, Willkomm, Mersch, Vaynzof & **Reisner*** *Angew. Chem. Int. Ed.*, **2012**, *51*, 12749–53
"Immobilization of a Molecular Cobaloxime Catalyst for H_2 Evolution on a Mesoporous Metal Oxide Electrode"
33. Lin, Lai, Mersch & **Reisner*** *Chem. Sci.*, **2012**, *3*, 3482–87
"Cu_2O/NiO_x Nanocomposite as an Inexpensive Photocathode in Photoelectrochemical Water Splitting"
32. Lakadamyali, Kato, Muresan & **Reisner*** *Angew. Chem. Int. Ed.*, **2012**, *51*, 9381–84
"Selective Reduction of Aqueous Protons to H_2 with a Synthetic Cobaloxime Catalyst in the Presence of O_2"
31. Lakadamyali, Reynal, Kato, Durrant & **Reisner*** *Chem. Eur. J.*, **2012**, *18*, 15464–75
"Electron Transfer in Dye-sensitised Semiconductors Modified with Molecular Cobalt Catalysts for H_2 Production"
30. Lv, Willkomm, [2], King, Gan, **Reisner,** Wood & Wright* *Chem. Eur. J.*, **2012**, *18*, 11867–70
"Formation of $Ti_{28}Ln$ Cages, the Highest Nuclearity Polyoxotitanates (Ln=La, Ce)"
29. Kato, Cardona, Rutherford & **Reisner*** *J. Am. Chem. Soc.*, **2012**, *134*, 8332–35
"Photoelectrochemical Water Oxidation with Photosystem II Integrated in a Mesoporous ITO Electrode"
28. Lv, Willkomm, Steiner, Gan, **Reisner** & Wright* *Chem. Sci.*, **2012**, *3,* 2470–73
"Encapsulation of a 'Naked' Br^- Anion in a Polyoxotitanate Host"
27. Less, Guan, Muresan, McPartlin, **Reisner**, Wilson & Wright* *Dalton Trans.*, **2012**, *41*, 5919–24
"Group 11 Complexes Containing the $[C_5(CN)_5]^-$ Ligand; 'Coordination-analogues' of Organometallic Systems"
26. Lakadamyali, Kato & **Reisner*** *Faraday Discuss.*, **2012**, *155*, 191–205
"Colloidal Metal Oxide Particles Loaded with Synthetic Catalysts for Solar H_2 Production"
25. Lakadamyali & **Reisner*** *Chem. Commun.*, **2011**, *47*, 1695–97
"Photocatalytic H_2 Evolution from Water with a Molecular Cobalt Catalyst on Dye-sensitised TiO_2"
24. **Reisner*** *Eur. J. Inorg. Chem.*, **2011**, 1004–16
"Solar Hydrogen Evolution with Hydrogenases: From Natural to Hybrid Systems"

Publications as Postdoctoral Researcher in Oxford (2008–2009)

23. Woolerton, Sheard, **Reisner**, Pierce, Ragsdale & Armstrong* *J. Am. Chem. Soc.*, **2010**, *132*, 2132–33
"Efficient and Clean Photo-reduction of CO_2 to CO by Enzyme-modified TiO_2 Nanoparticles using Visible Light"

22. **Reisner**, Powell, Cavazza, Fontecilla-Camps & Armstrong* *J. Am. Chem. Soc.*, **2009**, *131*, 18457–66
"Visible Light-Driven H_2 Production by Hydrogenases Attached to Dye-Sensitized TiO_2 Nanoparticles"
21. Lazarus, Woolerton, Parkin, **Reisner**, [3] & Armstrong* *J. Am. Chem. Soc.*, **2009**, *131*, 14154–55
"Water-Gas Shift Reaction Catalyzed by Redox Enzymes on Conducting Graphite Platelets"
20. **Reisner**, Fontecilla-Camps & Armstrong* *Chem. Commun.*, **2009**, 550–52
"Electrochemistry of a [NiFeSe]-hydrogenase on TiO_2 & Demonstration of Visible-light Driven H_2 Production"
19. Armstrong,* Belsey, [2], Parkin, **Reisner**, Vincent & Wait *Chem. Soc. Rev.*, **2009**, *38*, 36–51
"Electrochemical Investigations of H_2 Oxidation & Production by Enzymes and Implications for Technology"

Publications as Postdoctoral Researcher at MIT (2005–2007)

18. Friedle, **Reisner*** & Lippard* *Chem. Soc. Rev.*, **2010**, *39*, 2768–79
"Current Challenges for Modeling Enzyme Active Sites by Biomimetic Synthetic Diiron Complexes"
17. Harrop, Tonzetich, **Reisner** & Lippard* *J. Am. Chem. Soc.*, **2008**, *130*, 15602–10
"Reactions of Synthetic [2Fe-2S] and [4Fe-4S] Clusters with Nitric Oxide and Nitrosothiols"
16. **Reisner** & Lippard* *Eur. J. Org. Chem.*, **2008**, 156–63
"Synthesis of Dicarboxylate "C-clamp" 1,2-Diethynylarene Compounds as Potential Transition-metal Ion Hosts"
15. **Reisner**, Telser & Lippard* *Inorg. Chem.*, **2007**, *46*, 10754–70
"Planar Tetrairon Complex and Its Conversion to Linear Triiron and Paddlewheel Diiron Complexes"
14. **Reisner**, Abikoff & Lippard* *Inorg. Chem.*, **2007**, *46*, 10229–40
"Influence of Steric Hindrance on the Core Geometry and Sulfoxidation Chemistry of Diiron(II) Complexes"

Publications as PhD Student in Vienna & Lisbon (2002–2005)

13. Kowol, **Reisner**,* Chiorescu, Arion,* Galanski, [1] & Keppler *Inorg. Chem.*, **2008**, *47*, 11032–47
"Electrochemistry of Antineoplastic Ga, Fe & Ru Complexes with Redox Noninnocent Chalcogensemicarbazones"
12. Cebrián-Losantos, **Reisner**, Kowol, [2], Arion* & Keppler* *Inorg. Chem.*, **2008**, *47*, 6513–23
"Synthesis and Reactivity of the Aquation Product of the Antitumor Complex trans-$[Ru^{III}Cl_4(indazole)_2]$"
11. **Reisner***, Arion, Keppler & Pombeiro *Inorg. Chim. Acta*, **2008**, *361*, 1569–83
"Electron-transfer Activated Metal-based Anticancer Drugs"
10. Groessl, **Reisner**, Hartinger,* [3], Jakupec, Arion & Keppler* *J. Med. Chem.*, **2007**, *50*, 2185–93
"SARs for NAMI-A-type Complexes: Aquation, Redox Properties, Protein Binding, and Antiproliferative Activity"
9. Schluga, Hartinger, Egger, **Reisner**, Galanski, Jakupec & Keppler* *Dalton Trans.*, **2006**, 1796–802
"Redox Behavior of Tumor-inhibiting Ru(III) Complexes & Effects of Physiological Reductants on GMP Binding"
8. Jakupec,* Arion, Kapitza, **Reisner**, [4] & Keppler* *Int. J. Clin. Pharmacol. Ther.*, **2005**, *43*, 595–96
"KP1019 (FFC14A) from Bench to Bedside: Preclinical and Early Clinical Development – an Overview"
7. **Reisner**, Arion,* Eichinger, [2], Pombeiro* & Keppler* *Inorg. Chem.*, **2005**, *44*, 6704–16
"Tuning of Redox Properties for the Design of $[Ru^{III/II}Cl_{6-n}(Azole)_n]^z$ (n = 3, 4, 6) Anticancer Drugs"
6. **Reisner**, Arion,* Rufinska, Chiorescu, Schmid & Keppler* *Dalton Trans.*, **2005**, 2355–64
"Isomeric $[RuCl_2(dmso)_2(indazole)_2]$: Ru(II)-mediated Coupling Reaction of Acetonitrile with 1H-Indazole"
5. Jakupec, **Reisner**, [2], Arion, Galanski, Hartinger & Keppler* *J. Med. Chem.*, **2005**, *48*, 2831–37
"Redox-Active Antineoplastic Ru Complexes with Indazole: Correlation of in Vitro Potency & Reduction Potential"
4. Egger, Arion,* **Reisner**, Cebrián-Losantos, [2] & Keppler* *Inorg. Chem.*, **2005**, *44*, 122–32
"Reactions of Antitumor Complex *trans*-$[Ru^{III}Cl_4(indazole)_2]^-$ with a DNA-Relevant Nucleobase and Thioethers"
3. **Reisner**, Arion, Keppler, Pombeiro & Kukushkin* *J. Russ. Chem. Soc.*, **2004**, *48*, 137–39
"First Insights into Structure-Activity Relationships of Anticancer $[RuCl_4(azole)_2]^-$ Complexes"
2. **Reisner**, Arion,* [3], Keppler,* Kukushkin & Pombeiro* *Inorg. Chem.*, **2004**, *43*, 7083–93
"Tuning of Redox Potentials for the Design of Anticancer Drugs [*trans*-$RuCl_4L(DMSO)]^-$ and [*trans*-$RuCl_4L_2]^-$"
1. Arion,* **Reisner**, [2], Keppler,* Kukushkin & Pombeiro *Inorg. Chem.*, **2003**, *42*, 6024–31
"Synthesis, X-ray Structures, Spectroscopy & Antitumor Activity of Isomeric (Triazole)Ru(III) Complexes"

Patents

3. Patent on plastic photoreforming with enzyme pretreatment: GB2301443.4
2. Patent on biomass photoreforming with carbon photocatalysts: PCT/EP2019/064221
1. Patent on biomass photoreforming with visible-light photocatalysts: PCT/EP2017/080371