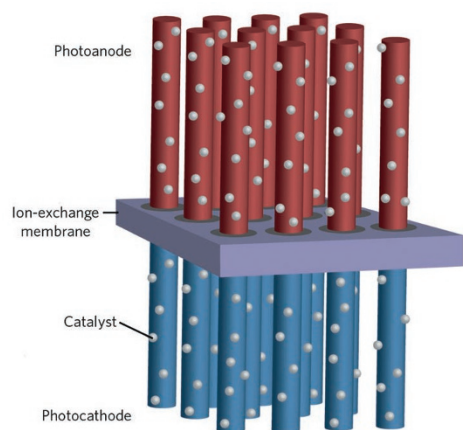


IN BRIEF

HETEROGENEOUS CATALYSIS

Mastering the mimicry of plants



Artificial photosynthesis — the direct production of fuels from sunlight — has long been the domain of science fiction. Generating the energy-rich materials that drive our society using solar power promises to improve the sustainability and carbon neutrality of transport and industry. But despite extensive research efforts, industrially applicable artificial photosynthesis has yet to be realized.

Writing in *Nature Nanotechnology*, Nathan Lewis traces the development of artificial photosynthesis technology in his lab over the past decade. Drawing on innovations in chemistry, catalysis, nanoscience and engineering, Lewis describes the ongoing journey towards safe and robust systems capable of efficiently capturing sunlight for hydrogen and oxygen evolution reactions. Key challenges remain to optimize, simplify and scale these systems, but a set of promising components have been identified for the assembly of complete prototypes.

Andrew Bissette, Associate Editor, Communications Chemistry

ORIGINAL ARTICLE Lewis, N. S. Developing a scalable artificial photosynthesis technology through nanomaterials by design. *Nat. Nanotechnol.* **11**, 1010–1019 (2016)