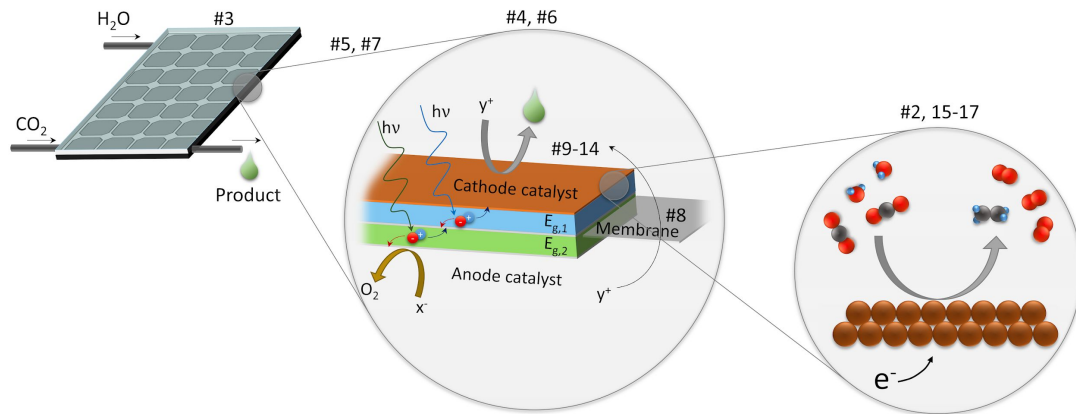


# Solar Fuels Roadmap



## Scientific Achievement:

An international team of 41 experts has assessed the state of the art of solar fuels generation, identified key challenges to overcome to enable a viable technology, and proposed advancements to meet these challenges from experimental and theoretical perspectives.

## Significance and Impact:

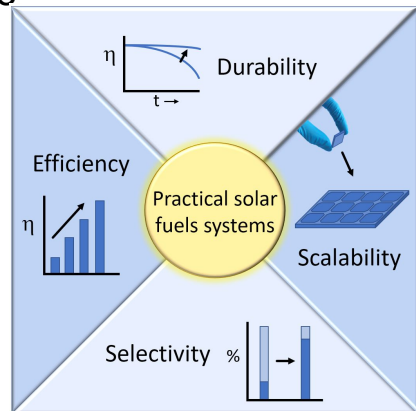
This Roadmap lays out research priorities to improve conversion efficiency, system stability, and product selectivity of sustainable solar fuels generation systems, providing a resource for the research community and for government and industrial sponsors of research programs.

## Research Details:

- Topics include system benchmarking, scaling, photoelectrode and system design, optical considerations, semiconductors, membranes and catalysis, bio concepts, accelerated materials discovery, relevant to H<sub>2</sub> and reduced CO<sub>2</sub> products

17 chapters cover all scales of solar fuels systems from the panel to the molecular level

Practical systems must have 4 key characteristics simultaneously, posing important research challenges.



Segev, G. et al, The 2022 Solar Fuels Roadmap, J. Phys. D: Appl. Phys. 55 (2022) 323003

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