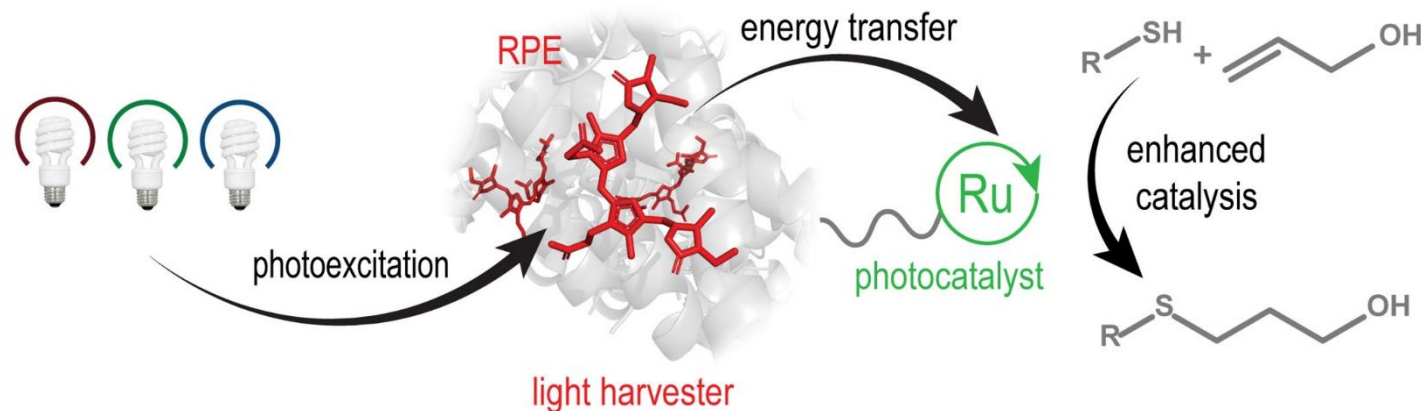


Bioinspired Light-Escalated Chemistry (BioLEC)

Gregory Scholes (Princeton University); Class: 2018-2026

MISSION: To combine light harvesting and solar photochemistry to enable more powerful editing, building, and transforming of abundant materials to produce energy-rich feedstock chemicals.



www.biolec.princeton.edu

Figure reused from P. T. Cesana *et al.*, *Chem* **2022**, 8(1), 5, ©2022, with permission from Elsevier

RESEARCH PLAN

We aim to reduce the energy costs of chemical manufacturing by finding ways to replace fossil fuels as both energy source and starting materials. We tackle this by developing photochemistry that enables new routes for synthesizing chemical feedstocks using only light for energy; looking to nature: discovering, synthesizing and studying photoenzymes that enable enhanced catalysis; using bioinspired tactics to improve photocatalysis; and informing the design of new and improved photocatalysts by elucidating photocatalysis mechanisms.



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