

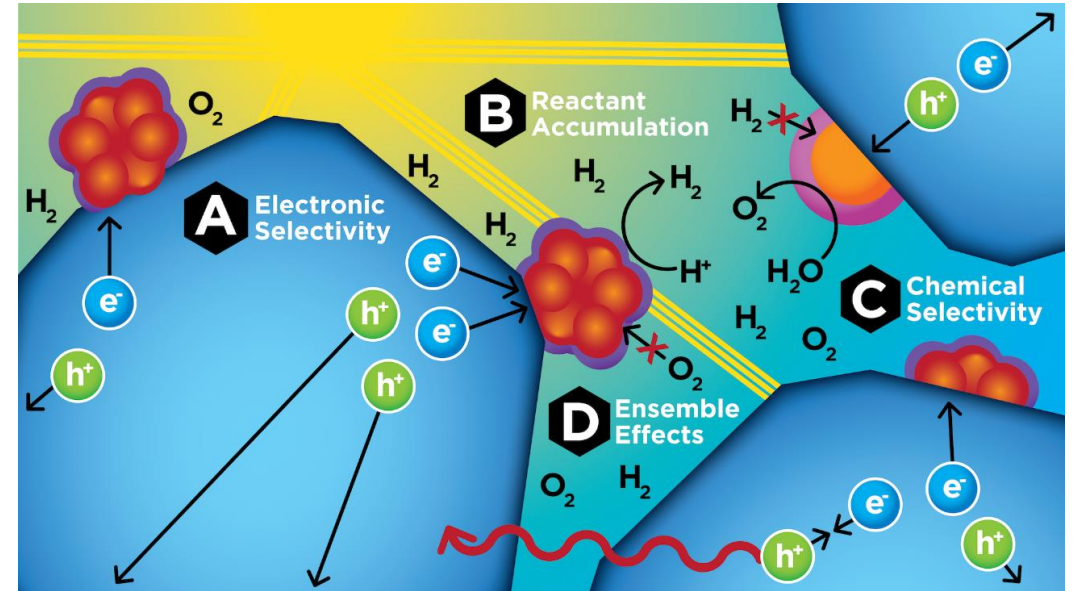
Ensembles of Photosynthetic Nanoreactors (EPN)

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MISSION: To understand, predict, and control the activity, selectivity, and stability of solar water splitting nanoreactors in isolation and as ensembles, *via concerted efforts spanning the four research thrusts of (A) Electronic Selectivity, (B) Reactant Accumulation, (C) Chemical Selectivity, and (D) Ensemble Effects.*

RESEARCH PLAN

EPN strives to advance the frontiers of discovery in solar photochemical fuel formation, recognizing that sunlight generates diffuse electronic charges, yet these charges must be concentrated to form the energy-dense chemical bonds in fuels. To achieve this goal, EPN aims to extend the lifetime of reaction intermediates, thus increasing the yields for charge separation and charge accumulation at reaction centers, while also enhancing redox selectivity, and therefore stability, that together dictate solar energy conversion efficiencies of nanoreactor ensembles.



<https://photosynthesis.uci.edu/>

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