

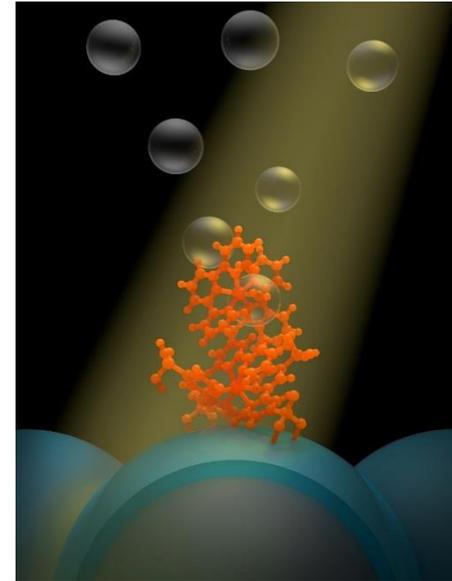
# Center for Solar Fuels (UNC EFRC)

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## **UNC EFRC MISSION:**

The **Center for Solar Fuels** conducts research on the dye sensitized photoelectrosynthesis cell (DSPEC) for water splitting and tandem cells for the reduction of carbon dioxide to carbon-based solar fuels.

[www.efrc.unc.edu](http://www.efrc.unc.edu)



## RESEARCH PLAN

A modular approach is applied to design, test, and evaluate high efficiency DSPEC device prototypes for solar water oxidation and CO<sub>2</sub> reduction to formate or syngas H<sub>2</sub>:CO mixtures. Results are being integrated from research on water oxidation, CO<sub>2</sub> reduction, light-harvesting chromophores and chromophore arrays, chromophore-catalyst assemblies, mesoporous nanoparticle semiconductor oxide and transparent conducting oxide films, and core/shell structures to create efficient DSPEC device prototypes.