

Center for Bio-Inspired Energy Science (CBES)

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MISSION: To develop the next frontier in soft materials relevant to energy challenges by designing structures that emulate functions we see in biological systems. CBES tackles the challenge of encoding synthetic soft materials with the ability to transduce energy forms and move autonomously in ways that are characteristic of “living matter”.



<https://cbes.northwestern.edu>

RESEARCH PLAN

The main goals are to develop new opportunities around the concepts of “robotic soft matter”, denoting the ability to rapidly perform mechanical, optical, or chemical tasks with only small inputs of energy, and “photosynthetic matter”, which requires systems structured holistically to enable efficient chemical production using visible light. We approach these enormous bio-inspired challenges through bottom-up chemical design and synthesis combined with top-down engineering strategies, computation, and theory.



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