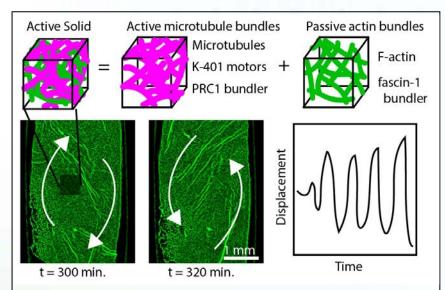
Active composite materials

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Active composites obtained merging a conventional soft matter actin gel with energy consuming microtubule bundles that generate active stresses leads to emergent properties not present in the individual systems. Here, the system exhibits coherent large scale self-driven oscillations, which neither the actin gel nor microtubule bundles will do on their own. The Center will exploit this phenomena to build autonomous soft robots with lifelike attributes.



Top: Schematic of the active elastomer composed of Fascin-bundled actin with intercalating microtubule bundles. **Bottom**: Visual representation of the system-sized elastic shear waves that emerge in this material.