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Lipids protect cells

With their molecular-recognition capabilities, living cells would make excellent sensors, but they must first be integrated into devices. [C. Jeffrey Brinker](#) and coworkers at Sandia National Laboratories, the University of New Mexico, and [Los Alamos National Laboratory](#) describe a method for incorporating cells into silica nanostructures and extending cell viability (*Science* **2006**, *313*, 337). Adapting an approach known as evaporation-induced self-assembly, they include lipids and cells in a mixture with silicic acid. During evaporation of the solvent to give a silica nanostructure, the lipids form a multilayered interface between the cells and the surrounding silica nanostructure. Additionally, the cells develop a pH gradient around themselves, which, the authors believe, switches the silica nanostructure from a hexagonal to a layered phase. The structure withstands drying and low pressure without cracking, protecting the cells and keeping them alive, even under dry conditions, without added buffer. More than half of the incorporated yeast cells were still alive after a month.

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