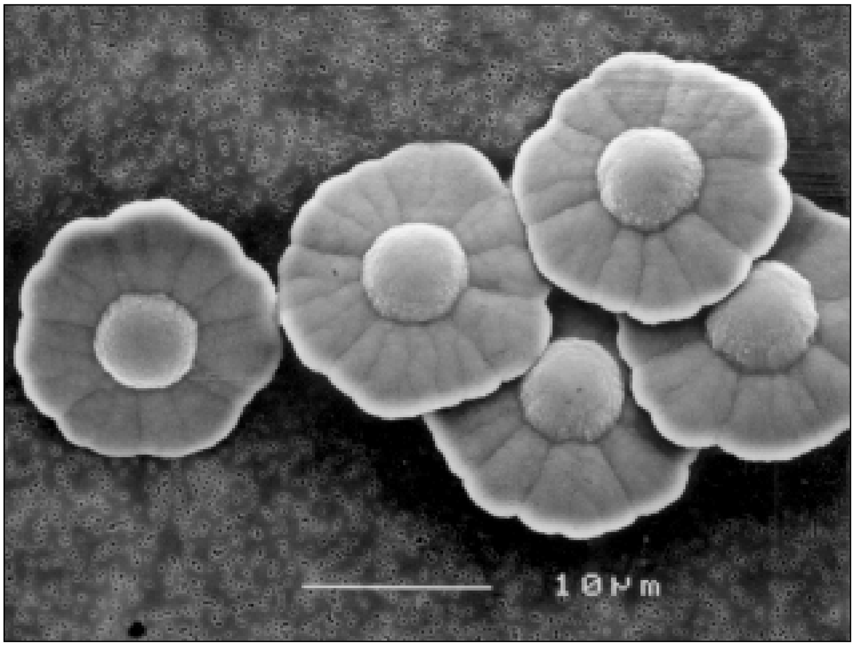
Figures appearing in EDITOR'S CHOICE *are those arising from materials research which strike the editor's fancy as being aesthetically appealing and eye-catching. No further criteria are applied and none should be assumed. When taken out of context, such figures often evoke images beyond and unrelated to the original meaning. Submissions of candidate figures are welcome and should include a complete source citation, a photocopy of the report in which it appears (or will appear), and a reproduction-quality original drawing or photograph of the figure in question.*



Urea, long known for its beneficial effects in your garden (it is all that nitrogen, you know) has proven itself again, but not exactly in the organic environment we are used to and not exactly using the fertilizing power of nitrogen compounds. This month's EDITOR'S CHOICE pictures flowers (stemless though they be) cultivated by reacting urea with an inorganic salt of calcium under the watchful eyes of L. Wang, I. Sondi, and E. Matijević, who report their botanical success in *J. Colloid Interface Sci.* **218** (1999) 545–553. As is often the case, the gardeners' objectives were not these blossoms at all. Rather, they were trying, and in fact succeeded, to produce high aspect ratio needle-like calcium carbonate particles in the aragonite crystal structure. Those aragonite needles were fickle, however, requiring highly optimized conditions of temperature (circa 90 Celsius), solution aging (upwards from about three hours), and concentration of the initial urea and calcium chloride reactants. When conditions were not right, such nonfloral structures as calcite rhombohedra resulted. The typical approach to growing the carbonate particles involved premixing aqueous solutions before heating and aging so that ionic concentration and reactivity increased with temperature. However, when separate solutions of the reactants were first heated and aged and only then mixed together, the scanning electron microscope revealed these little daisy-shaped growths on the Millipore filter used to collect them. X-ray diffraction showed them to be in the vaterite structure and unlike their bio-analogues, they did not particularly mind the x-ray dose. Some may see this image and, realizing that preparation involved very hot moist conditions, harbor the suspicion that the growth is more mold than flower. But as the published account of this work reveals in an insightful footnote, the first observation of alkaline-earth blossoms as these was made several years ago in Japan, a place where horticultural expertise leaves little chance for confusion of fungus with flower.

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*Please visit us at the Exhibit, November 28-30, during the 2000 MRS Fall Meeting in Boston.

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