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.



You see a Helianthus annuus, no doubt, bearing edible seeds, rich in oil, surrounded by a gorgeous bright yellow explosion of color not entirely discernible in this month's EDITOR'S CHOICE which comes to you in monochrome. But then this department of MRS Bulletin always relies heavily on suspension of the reader's disbelief. Were this not a plan view of one of nature's botanical wonders, you could see the convincingly tall stem supporting this blossom as well as the thesis that it is indeed a sunflower. Well, this one is not quite ready for the salad bowl yet. This flower was grown in Beijing and reported to us by Prof. Jizhong Zhang of the Tsinghua University (J.Z. Zhong, X.Y. Ye, X.D. Yang, and H.D. Li, preprint). The flower bed was a (111) face on a silicon crystal and the whole blossom, from central flower disk to outer petal skirt, is composed of cadmium iodide (CdI₂) crystallites. The temperature (863 K) from which the substrate is slowly cooled and the local CdI2 vapor concentration conspire under certain conditions to nucleate and grow structures in a self-organized way with all the attendant fractal implications pertaining thereto. The seeds in the ten micron center region are regular submicron crystallites while the petals reaching the 24 micron diameter are oar-shaped crystallites with fish-scale surfaces (differentiation between floral and faunal analogies at this scale is clearly difficult). The morphology of gas-solid transformation as revealed in deposited structures is complex and hard to predict. We are compelled to wonder, however, whether in this case the natural green-yellow color of raw CdI₂ powder didn't play a role.

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