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Crystallographic architecture of sea urchin biocalcite

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We determined the crystallographic and microstructure properties of the biocalcite of two species of regular sea urchins by electron backscatter microdiffraction (EBSD) and laboratory X-ray diffraction. The spines are essentially single crystals despite their segmented and/or stereom-like structure of hollow space between calcite walls. The body test plates consist up to 1mm sized single-crystalline stereom blocks, separated by small-angle boundaries.

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