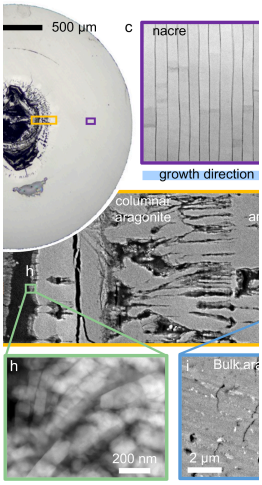
Nov. XX, 2021
Contacts: Gabe Cherry, 248-763-3947, gcherry@umich.edu
Katherine McAlpine, 734-763-2937, kmca@umich.edu

Captions: How pearls achieve nanoscale precision



particle_resolving.png:

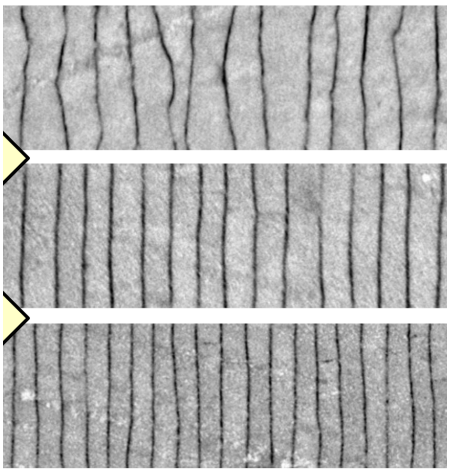
a. A Keshi pearl that has been sliced into pieces for study.

b. A magnified cross-section of the pearl shows its transition from its disorderly center to thousands of layers of finely matched nacre.

c. A magnification of the nacre layers shows their self-correction—when one layer is thicker, the next is thinner to compensate, and vice-versa.

d, e: Atomic scale images of the nacre layers.

f, g, h, i: Microscopy images detail the transitions between the pearl's layers.



nacre_growth.png: Electron microscopy shows how a pearl's layers of nacre become more precise as they build outward from the pearl's center.