



Cover: Barnacles adhere to surfaces in the marine environment using a proteinaceous cement. Liquid cement is released by ducts at the junction of the calcified base and lateral plates (X-ray microtomographs, foreground), and rapidly cures. Inspired by evolutionary concepts, Dickinson et al. (pp. 3499–3510) show that barnacle cement polymerization occurs by a biochemical mechanism strikingly similar to that of blood clotting. Like blood clotting, cement polymerization involves proteolytic activation of enzymes and structural precursors, transglutaminase cross-linking, assembly of fibrous proteins (atomic force microscopy image, background), and release of chemical signals. Images: G. H. Dickinson, R. K. Everett, K. J. Wahl and D. Rittschof.

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