



FIGURE 19.9. Thin-section photomicrographs of various cement types. (A) Syntaxial quartz overgrowths under cross-polarized light. Dark arrows point to “dust rims” outlining the detrital grain boundary; light arrows point to euhedral termination of quartz overgrowth in pores (filled with blue epoxy resin). Width of field 2 mm. Courtesy of Tim Lowenstein. (B) Fibrous aragonite cement in an intraparticle pore. Width of field 0.42 mm. From Scholle and Ulmer-Scholle (2003). (C) Two generations of carbonate cement in a reef cavity. The arrows point to a cloudy, fibrous first-generation cement lining the cavity that was buried by a later blocky mosaic. Field of view ~10 mm. From Scholle and Ulmer-Scholle (2003). (D) A cathodoluminescence view of drusy cement expanding into a large void. The luminescence is excited by manganese but repressed by iron and reveals slight geochemical variability in the cements. Field of view 11 mm. From Scholle and Ulmer-Scholle (2003). (E) Meniscus cements comprised of fine blocky carbonate. Note the rounded pore at the lower center of the photograph. Field of view 0.6 mm. From Scholle and Ulmer-Scholle (2003). (F) Large patches of poikilitic calcite cement crystals. Field of view 2 mm. Courtesy of Tim Lowenstein. Figures from Scholle and Ulmer-Scholle AAPG © 2003 reprinted by permission of the AAPG, whose permission is required for further use.