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COVER Topological maps of electron densities for diamond (upper) and silicon (lower). Red disks represent atoms and red lines are drawn along the scaled covalent bonds in a 110 plane. The pileup of electronic charge forming the covalent bonds has two peaks for carbon and one for silicon because of the lack of *p* electrons in the carbon atom core. It is speculated that this is the origin of the difference in the multiple bonding character of these elements and why "carbon gives biology, but silicon gives geology." See page 549. [Marvin L. Cohen, University of California, Berkeley 94720; design executed by Margareta Slutzkin and Marianne Friedman, M and M Graphic Designs, Oakland, CA]

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