1-D zigzag nanowires and 2-D nanosheets from disassembled 3-D opal. Li, Feng; Xu, Lianbin; Zhou, Weilie L.; He, Jibao; Baughman, Ray H.; Zakhidov, Anvar A.; Wiley, John B. Advanced Materials Research Institute and the Department of Chemistry, University of New Orleans, New Orleans, LA, USA. Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23-27, 2003 (2003), INOR-259. Publisher: American Chemical Society, Washington, D. C CODEN: 69DSA4 Conference; Meeting Abstract written in English. AN 2003:183303 CAPLUS (Copyright 2003 ACS)

Abstract

3-D photonic crystal metal-mesh composites can be prepd. by electrochem. deposition into silica opal arrays. Subsequent disassembly of these composites can then lead to unusual 2- and 3-D nanomeshes and 1-D nanowires with a zigzag motif. Further, by controlling the size and shape of fabricated nanowires, sometimes in combination with self-assembly techniques, new, interesting extended structures can be produced.