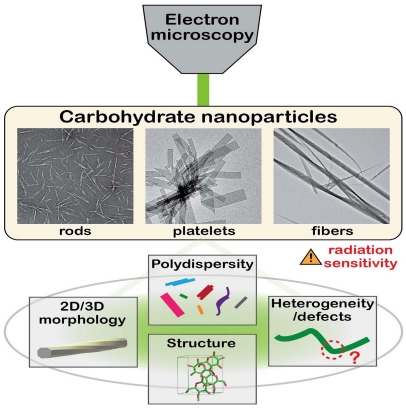
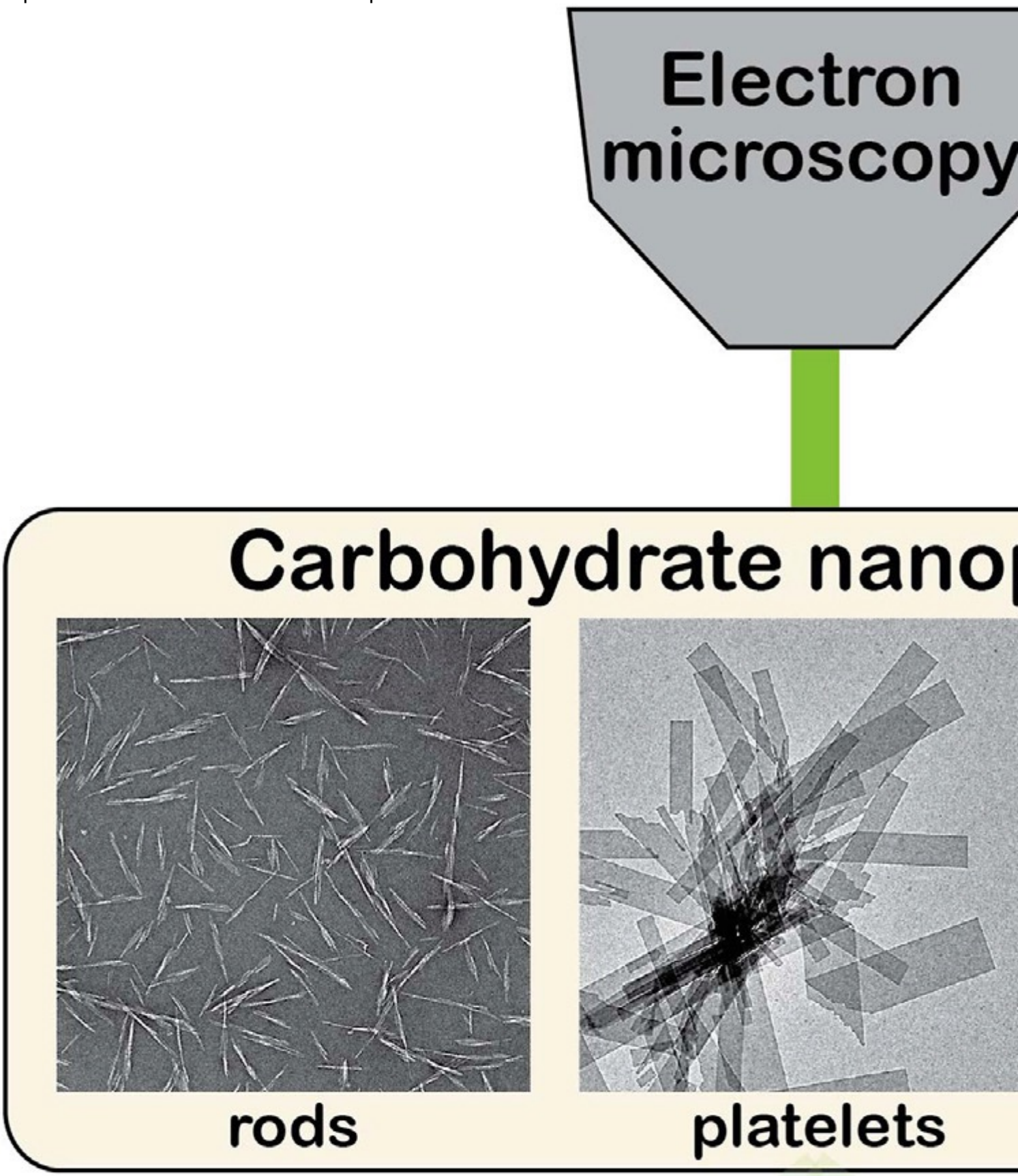


Recent Advances in Electron Microscopy of Carbohydrate Nanoparticles

Description

Carbohydrate nanoparticles, both naturally derived and synthetic ones, have attracted scientific and industrial attention as high-performance renewable building blocks of functional materials. Electron microscopy (EM) has played a central role in investigations of their morphology and molecular structure, although the intrinsic radiation sensitivity of carbohydrate crystals has often hindered the in-

depth characterization with EM techniques.



This contribution reviews the recent advances in the electron microscopy of carbohydrate nanoparticles. In particular, we highlight the recent efforts made to understand the three-dimensional shape and structural heterogeneity of nanoparticles using low-dose electron tomography and electron diffraction techniques coupled with cryogenic transmission electron microscopy.

Category

1. News