Development of DMFC Catalysts Using Mesoporous Carbon Materials

Since the first report on the successful synthesis of ordered mesoporous carbon (OMC) using a mesoporous silica template, OMCs have been of great interest due to their regular mesopore sizes, high surface areas, and high pore volumes. Vast progress has been made in the preparation of OMC materials with modified surfaces, graphitic frameworks, and pore structures, which enable their utilization for various applications such as adsorbents, catalyst supports, nano-templates, materials for advanced electronics, etc. Here, the synthesis of mesoporous carbon materials with controlled pore structures and surface functionality, which play key roles for the application to catalyst supports of DMFC, will be discussed.