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Abstract

A series of metal organic frameworks-derived nanoporous carbons originating from zeolitic imidazolate framework-8 (ZIF-8) crystals as precursors have been prepared via varying the preparation conditions. The ZIF-8-derived carbons were subsequently admixed in the methacrylate monomers containing polymerization mixtures and polymerized to obtain monolithic columns for capillary electrochromatography (CEC). The effect of particle size and content of the ZIF-8-derived carbon materials in the polymerization mixture on the performance of the hybrid monolithic columns was investigated in detail. The resulting composites were characterized using scanning electron microscopy. Using short time UV-initiated polymerization, monolithic beds