

Fabrication of Porous Microspheres of Poly(methyl methacrylate) Impregnated by Scoria Powder via Electro spraying

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Porous PMMA microspheres impregnated by Scoria nanoparticles were fabricated via electro-spraying process. The size and the morphology of the micro-structure was well-controlled by varying the PMMA concentration, co-solvent ratio, PMMA/Scoria ratio and the relative humidity. SEM images showed that the resulting microspheres exhibited highly-porous structure and spherical morphology. Energy dispersive X-ray mapping confirmed that the Scoria nanoparticles were homogeneously distributed throughout the composited microspheres. This study clearly indicates that the well-defined architecture of the PMMA/Scoria microspheres could be potentially advantageous in the applications to catalyst, sensor and cosmetics.