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Preparation of porous microspheres of biodegradable polymer impregnated by Scoria (Volcanic ash) nanoparticles via electrospraying

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Porous poly (lactic acid-co-glycolic acid) (PLGA) microspheres impregnated by Scoria (Volcanic ash) nanoparticles were fabricated via electro-spraying process. The size and the morphology of the micro-structure was well-controlled by varying the PLGA concentration, co-solvent ratio, PLGA/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 PLGA/Scoria microspheres could be potentially advantageous in the applications to catalyst, sensor and cosmetics.

Biography

Hyunsuk Lee has completed his PhD from Nottingham. He is the Senior Researcher of Amorepacific R&D Center, the biggest cosmetics company of South Korea. He has published more than seven papers in reputed journals.

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