

Abstract

Liquid Flame Spray (LFS) is one type of flame spray pyrolysis technique, producing highly dispersed aerosol nanoparticles. The most common materials are noble metals, metal oxides and their mixtures, with nanoparticle size varying within the range of 2-200 nm. In the coating process, the flame is directed against a surface to deposit the nanoparticles to form a thin functional coating. Recently, LFS has been used to fabricate several types of functional coatings. In the presentation some of them will be discussed: controlled switching of surface wetting, anti-bacterial coatings, UV- & corrosion protection, photocatalysis, anti-icing with slippery liquid infused porous surfaces (SLIPS) and microfluidistics.