A facile “dip & rinse” method of metal coating on various neutral hydrophobic surfaces

We developed a facile “dip & rinse” method for metal coating on virtually any hydrophobic surfaces including hydrophobic polymer surfaces such as PE, PP, and PS. This process eliminates the need for toxic and/or harsh surface treatment steps for catalyst adsorption/immobilization. As examples, various hydrophobic polymer surfaces with different geometries and dimensions, including low density polyethylene (LDPE), high density polyethylene (HDPE), polypropylene (PP) and polystyrene (PS) thin sheets, PE pellets (0.5 mm) as well as non-functional PS microspheres (10 μm) were tested and metal film was successfully deposited onto all these surfaces.