In this work we study the deposition of hydrophobic fluorocarbon coatings by magnetron sputtering of polymeric PTFE target. We show what is the influence of the conditions of the deposition process – the pressure in the chamber, the RF power – on the properties of the resulting CFx thin films (their chemical composition, morphology, wettability, barrier and optical properties, stability and possible bio-aplications). In this work we use a novel way to control the morphology and the chemical composition of the surface of thin films independently by using nano-particles, both metal (Pt, Cu, Al) and polymeric (C:H, Nylon). With nano-particles we can control the hydrophobicity of thin films and we can prepare super-hydrophobic films.
Work has an experimental character.