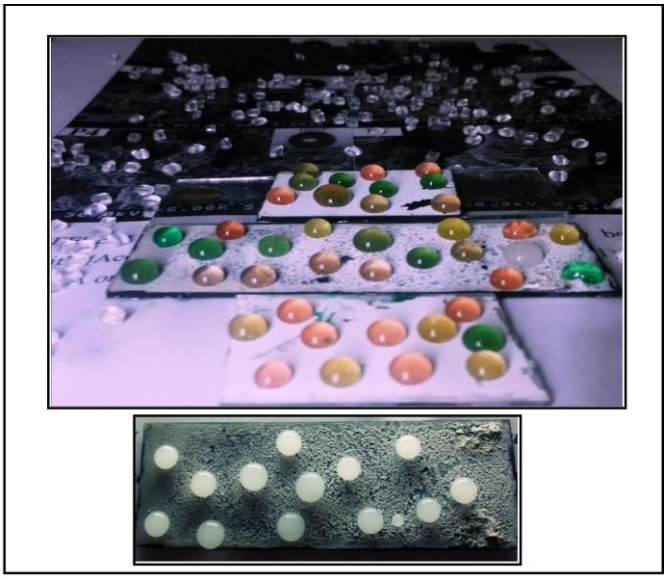
Study the Effect of Polycarbonate Superhydrophobic Nanocomposite on Antibacterial Activity

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Abstract Polycarbonate (PC) nanocomposite surfaces were prepared by simple solvent/non-solvent selected method with added AgNps and Ag at room temperature. At the same time a systematic study of dependence antibacterial activity on surface morphology and AgNps. The resulting surfaces demonstrated excellent CA of surfaces and inhibition percentage of Pseudomonas aeruginosa bacteria. FESEM showed that the surface structure comprised branches or petals outside the 'plant seabeds' formation, in addition to related AgNps and Ag with a rough structure. In order to test the stability PC nanocomposite surfaces, Pseudomonas aeruginosa suspensions were poured above the surface and allowed to settle on top of the surface for several minutes, then, an Antiadhesive effect of colonies bacteria was evaluated with very small percentage of bacteria adhesive on surfaces.





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Publication

1- Article entitled "Novel approach to fabricate polycarbonate antibacterial superhydrophobic surfaces" Journal of Adhesion Science and Technology, International academic publishers with offices in UK/London.

2- Article entitled "Novel approach to fabricate a stable superhydrophobic polycarbonate" Journal Surface Engineering, International academic publisher with offices in UK/London.

3- Article entitled "Study the effect of solvent / non-solvent on polycarbonate", In journal "Advances in Nanomaterials" in USA.

4- Book entitled "Synthesis and Characterization of Nano Self-clean Polycarbonate Surface", In LAP LAMBERT Academic Publishing, in Germany.