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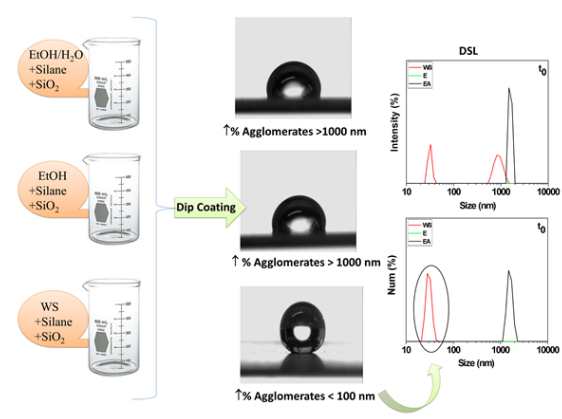
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Influence of the type of solvent on the development of superhydrophobicity from silane-based solution containing nanoparticles

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Graphical Abstract



Highlights

[Superhydrophobic surface on stainless steel is fabricated from silane-SiO₂ nanoparticles solution.](#)

[High dispersion of agglomerates is required to get hierarchical structure.](#)

[The dispersion degree of silica nanoparticles is function of the solvent used.](#)

[Nanoparticles-solvent compatibility is mandatory to have high dispersion.](#)

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Abstract

Superhydrophobic surfaces are very appealing for numerous industrial applications due to their self-cleaning capacity. Although there are different methods to manufacture superhydrophobic surfaces, some of them do not keep the aesthetic appearance of the neat surface. Sol-gel processes are a valid alternative when transparent coatings are desired. The

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