

Comparison of Impact Dynamics of Ethanol and Water with Different Surface tension by height

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Reduced interaction with water allows the use of superhydrophobic (SHPo) surfaces to reduce frictional resistance, improve water harvesting, self-cleaning and heat transfer. In particular, mesh-type SHPo surfaces which have pore arrays with diameters ranging from tens to hundreds of micrometers can be used as fluid sieve for selectively capturing or separating one fluid phase from another fluid. Different surface tension affects critical penetration velocity, which leads to different penetration dynamics on a mesh during drop impact. The impact dynamics of ethanol and water with different surface tensions at different heights were compared and analyzed in this research.