

Global Challenges

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Supporting Information

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**An Aqueous Composition for Lubricant-Free, Robust,
Slippery, Transparent Coatings on Diverse Substrates**

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Supporting Information

An aqueous composition for lubricant free, robust, slippery, transparent coatings on diverse substrates*Avijit Baidya^{a,b}, Sarit kumar Das^b and Thalappil Pradeep^{a,*}***Supporting Information Figures**

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Video S7	Effect of aqua regia
Video S8	Behavior of oil and emulsion on coating (glass & wood)
Video S9	Effect of aqua regia on coated metal surface

Supporting Information 1

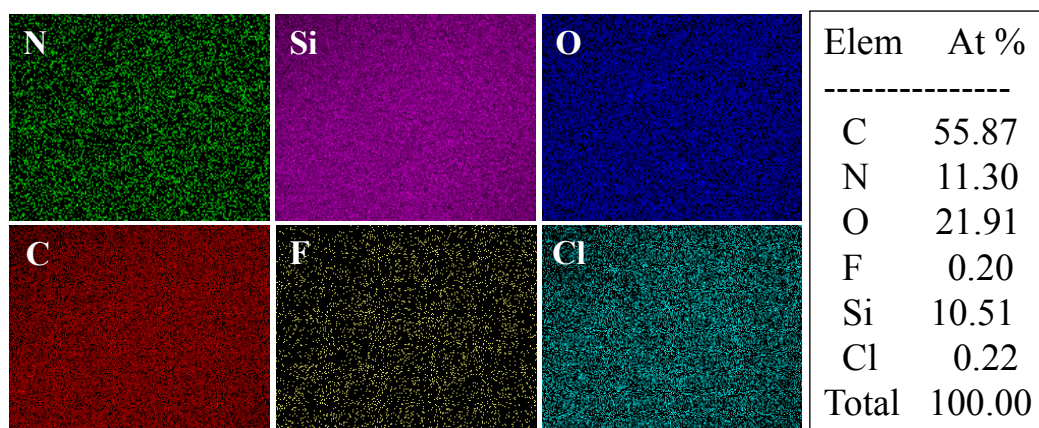


Figure S1: SEM EDAX mapping and quantitative distribution of elements.

Supporting Information 2

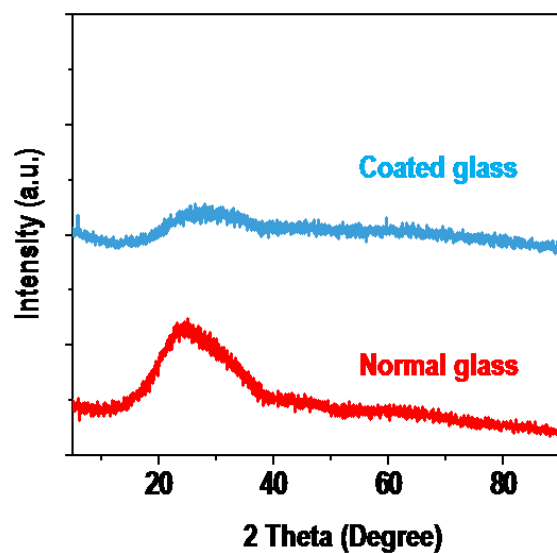


Figure S2: Powder XRD: Amorphous structure of glass is unchanged with coating.

Supporting Information 3

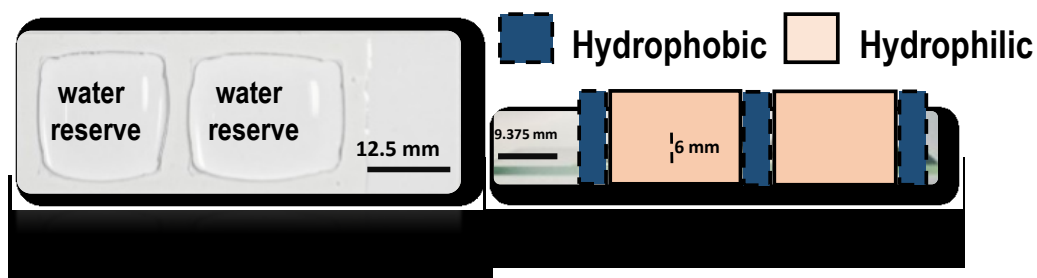


Figure 3: Designed invisible water barrier holds up to 4 mm height of water in air. The top and side view of the water mountain.

Supporting Information 4

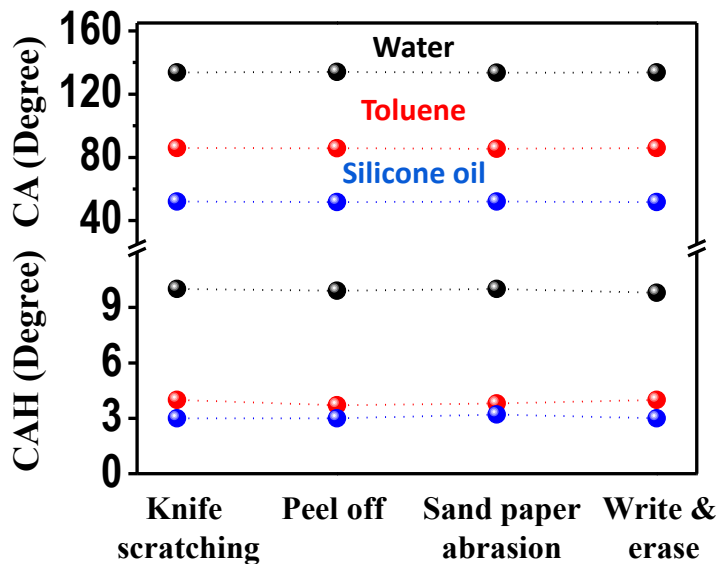


Figure S4: Wettability of the coated glass surface after different mechanical tests (20 cycles).

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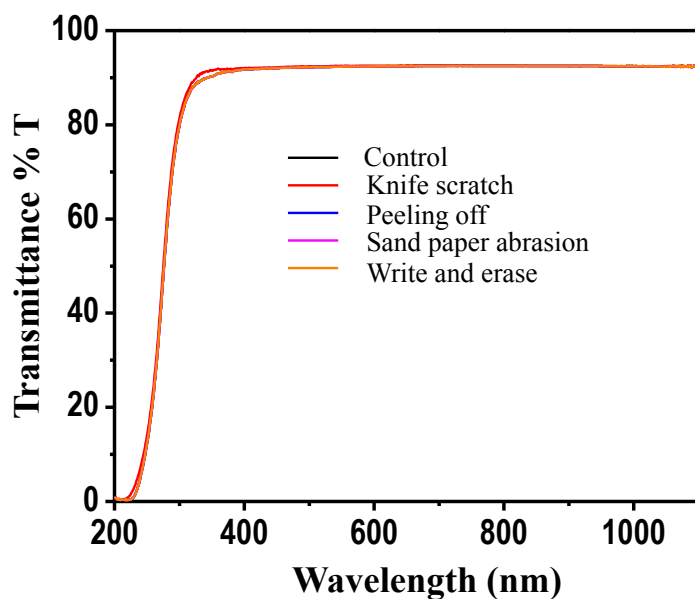


Figure S5: Transparency of the coated glass after different mechanical tests (20 cycles). The graph shows 99.6 % transmittance of the treated substrates with respect to the untreated control.

Supporting Information 6

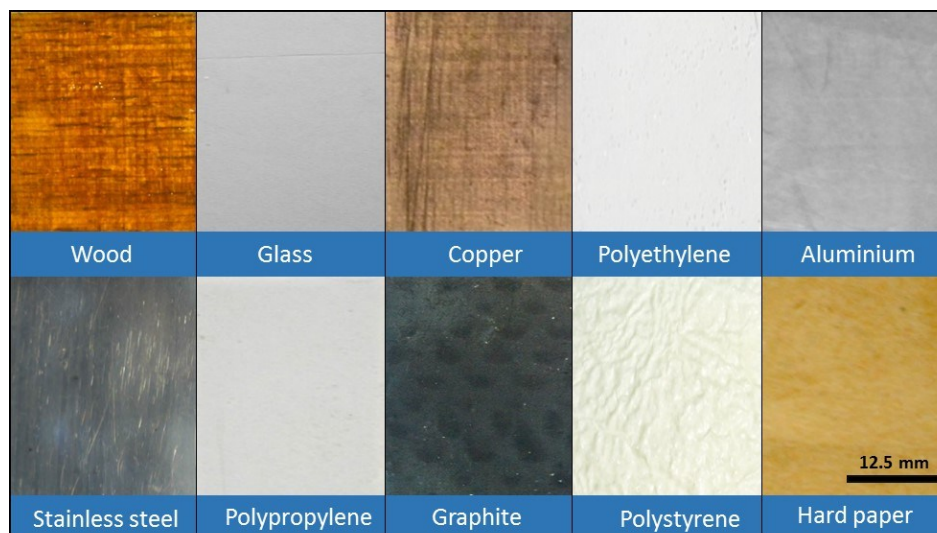


Figure S6: Universality of the coating. The coatings can be universally applied to all substrates from wood to plastic and the appearance of the substrate remains unchanged even after the coating.

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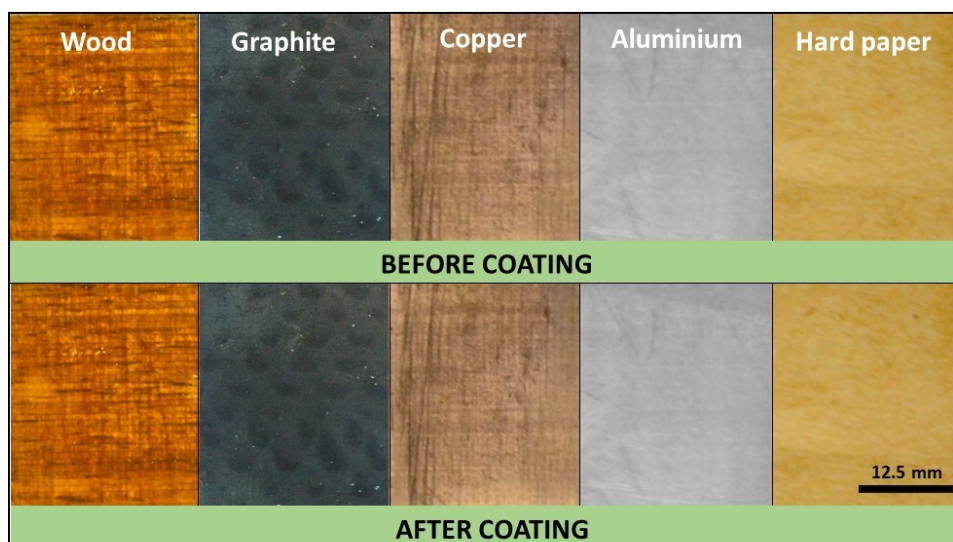


Figure S7: Physical appearance of different substrates before and after coating. There was no change in color in wood as there was no temperature fluctuation (see S8, where there was a color change).

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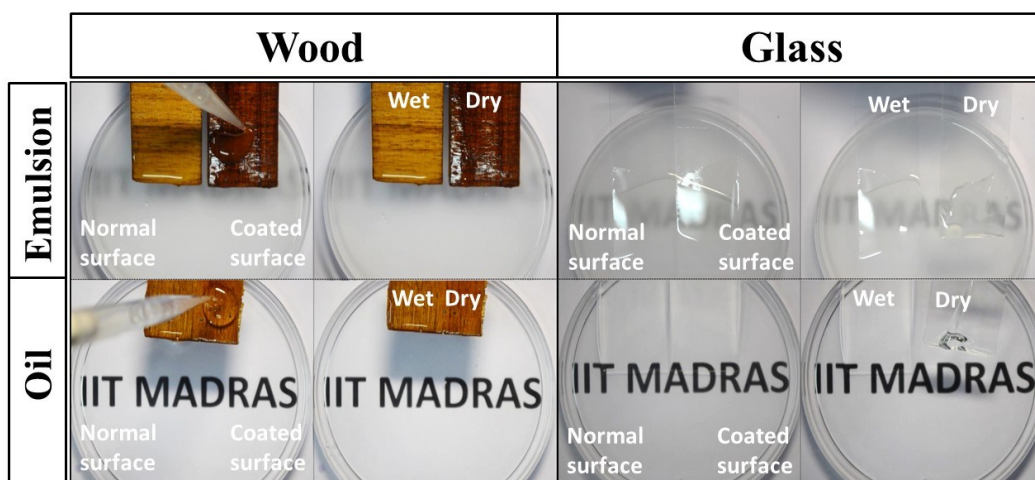


Figure S8: Oil (viscous oil and emulsion) repellent slippery nature of the coating (on wood and glass). Change in color and contrast of the wood is because of temperature fluctuations during the sample preparation. See Figure S7 for a surface without change in color after coating.