

## Synthesis of novel Bi/Bi<sub>2</sub>O<sub>3</sub>@Al<sub>2</sub>O<sub>3</sub> nanocomposite for wastewater treatment, self-cleaning, and corrosion resistance

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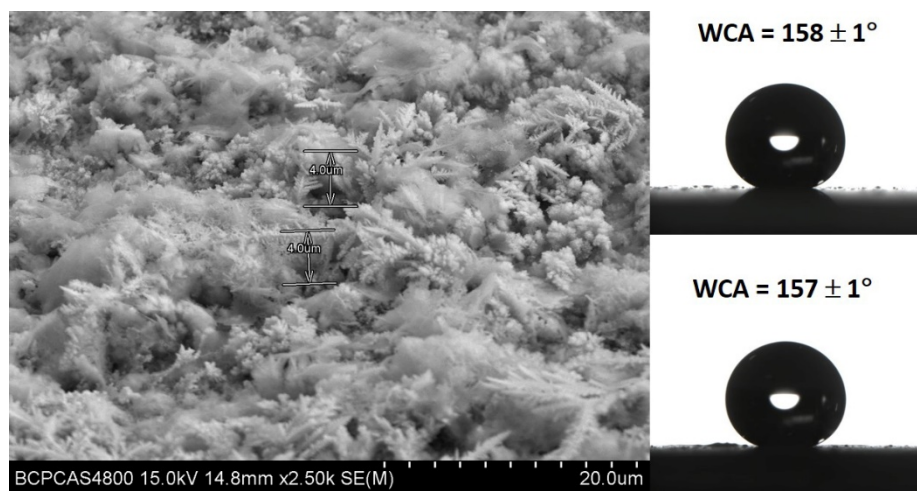
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**Figure S1.** SEM image after the electrochemical impedance experiments by using 3.5% NaCl solution along with water contact angles before and after the experiment.

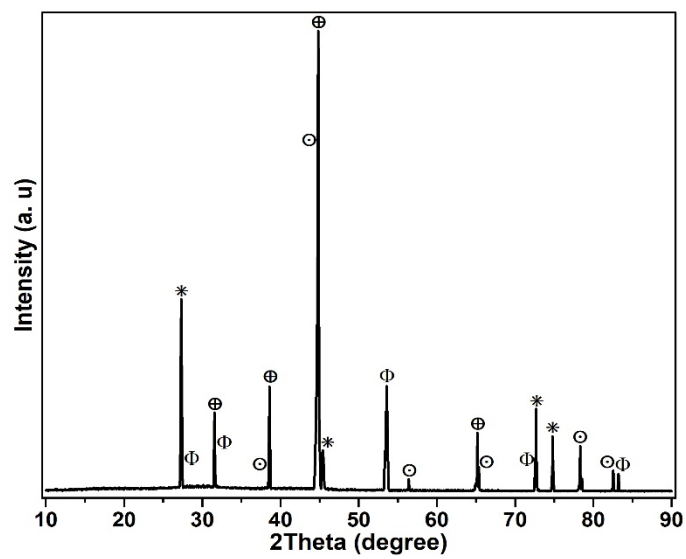
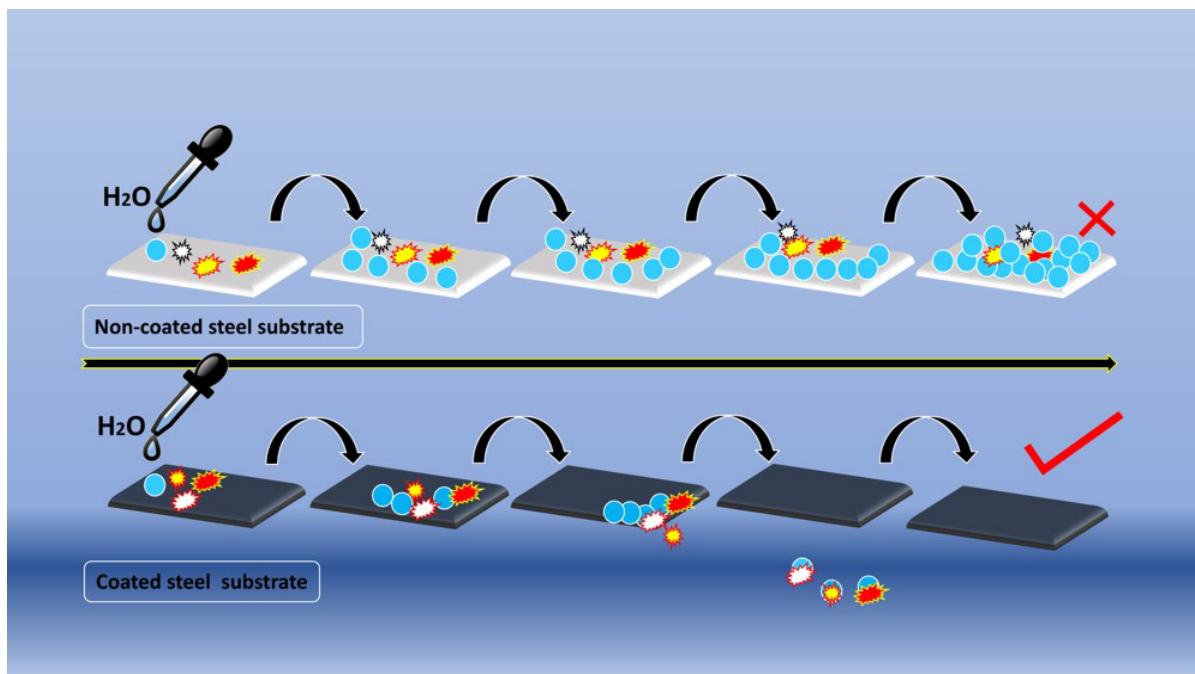


Figure S2. XRD analysis after the electrochemical impedance experiments by using 3.5% NaCl solution.



**Figure S3.** Images of self-cleaning phenomena the non-coated and coated by polymeric coating of bismuth-aluminum oxides nanocomposite of the substrate surface.