

A humidity repellent and acid-proof self-assembling passivation for gas sensors and transducers with open surfaces

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Abstract	Self assembling mono layers are used to fabricate a humidity repellent and acid-proof film for transducer surface passivation. This protection can be used for silicon containing surfaces, like SiO ₂ or Si ₃ N ₄ , as well as for aluminium. Etching tests with aggressive acids have shown a more than tenfold higher etching time for 110 nm aluminium layers in the case of protected surfaces. The hydrophobic characteristics are used in a gas sensor to prevent the unintentional ionic drift by surface currents. Stable operation of the gas sensors in environmental condition with r.h. up to 95% is possible.
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