

Chemically Modified Surfaces With Self Assembled Aromatic Functionalities

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BRIEF DESCRIPTION

The invention is a method for mild and facile chemical modification of electroactive surfaces that permits tailoring of their physical properties and protects against corrosion.

FULL DESCRIPTION

Chemically transforming surfaces to incorporate molecules of interest is an important approach to generating tailored materials with specific bulk and surface physical, optical, or electronic properties. However, the number of synthetic methods that successfully immobilize desired molecular species to surfaces without loss of properties remains limited. UCI researchers have developed a new synthetic methodology for modifying a variety of electrode surfaces with virtually any species of interest. This mild, yet reliable method is compatible with an unprecedented range of chemical functionalities and can be used in a wide array of applications. When used with electroactive materials, this method provides an additional benefit of protecting them against corrosion.

SUGGESTED USES

• Sensors for biological or chemical targets, molecular diagnostics • New photoelectrochemical or electrode materials (electrocatalysts) for chemical fuel formation or biomass reforming • Novel electroresponsive materials with adjustable properties, including electrochromic materials

ADVANTAGES

• Mild and compatible chemistry • Possibilities for a great variety of surface modifications • Supplemental benefit of defense against corrosion

PATENT STATUS

Patent Pending

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OTHER INFORMATION

CATEGORIZED AS

- » **Materials & Chemicals**
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- » Composites
- » Polymers

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