

Composite-track etched membranes for environmental applications

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The photocatalytic removal of various classes of organic and inorganic pollutants is one of the most widely used methods due to its high efficiency, low cost and simplicity. The current research in this area is aimed at developing new technologies for producing high-performance and low-cost catalysts. Various types of composite materials have attracted much research attention in the field of photocatalysis owing to their advantages, such as their design flexibility, improved physical and chemical properties and stability.

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In this study a composite TeMs based on metals of the copper subgroup demonstrated high catalytic activity for removal of different classes of water pollutant i.e dyes, nitrophenols, pesticides. Cu and CuO-based composites have been shown to exhibit high efficiency in the sorption of As(III) and Pb(II) ions. Some important advantages of such catalysts and sorbents are their ease of use, low cost and ease of production, as well as the possibility for multiple reuses without additional activation and regeneration procedures.

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