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- (54) Title: CARBENE FUNCTIONALIZED COMPOSITE MATERIALS

(57) Abstract: The present application provides stable, carbene-functionalized composite materials, and methods and uses thereof. These carbene-functionalized composite materials comprise a material having a metal surface, and a carbene monolayer that is uni-form, contaminant-free (metal oxide, etc), and more stable than thiol-functionalized monolayers. Uses of such carbene-functionalized composite materials include semi-conducting materials, microelectronic devices, drug delivery or sensing applications.

