

Van der Waals 2D lanthanide-based materials: nanosheets and on-surface chemistry

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A van der Waals 2D material based on simple carboxylato ligands and lanthanoid ions will be presented. Microwave assisted synthesis has been used to obtain [Ln(MeCOO)(PhCOO)]. The van der Waals interactions between nanosheetst have been calculated for the Dy analogue and are similar to those in graphene. The material can be easily delaminated into nanosheets with large lateral sizes of several micrometers that can be observed by TEM. We will also report on-surface chemistry on silanized silicon wafers. The nanosheets are anisotropic and can be grown onto a functionalized silicon wafer with homogeneous coverage of the whole surface.

Referencias

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