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Stuttgarter Physikalisches Kolloquium

Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme
Fachbereich Physik, Universität Stuttgart

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Login data will be announced by e-mail and on the colloquium webpage.

Dienstag, 16. November 2021 | **16.15 Uhr** | **Online / Hörsaal 2D5**

Stuttgarter Max-Planck-Institute, Heisenbergstraße 1, 70569 Stuttgart-Büsnau

Playing Lego with 2D materials

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Abstract

Even since the Mayans first used clays to make dyes, mankind has studied and made use of layered materials. Currently we live in an era of enormous interest in the manipulation of two-dimensional materials following the discovery of graphene. In this colloquium I shall illustrate various aspects of production of 2D solids and then pass on to pillared structures achieved by intercalation of molecules between the 2D layers and stacked bilayer structures. Fascinating fundamental discoveries concerning the electronic states in single and stacked layers will be discussed as well as the use of pillared materials for gas storage, catalytic and biomedical applications.