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Titel des Beitrags:
Size-Selected Monodisperse Nanoclusters on Supported Graphene: Bonding, Isomerism, and Mobility

Abstract:
Soft-landing of size-selected Pdn (n ≤ 20) nanoclusters on a Moire-patterned surface of graphene adsorbed on Ru(0001) leads to controlled formation of a truly monodisperse cluster-assembled material. Combined scanning tunneling microscopy and first-principles calcns. allow identification of selective adsorption sites, characterization of size-dependent cluster isomers, and exploration of interconversion processes between isomeric forms that manifestly influence cluster surface mobility. Surface-assembled cluster superstructures may be employed in nanocatalytic applications, as well as in fundamental investigations of phys. factors controlling bonding, structure, isomerism, and surface mobilities of surface-supported clusters. [on SciFinder(R)]

Stichworte:
Adsorbed substances Adsorption Bond Cluster structure Diffusion Epitaxial films Isomers Surface structure (bonding, isomerism, and mobility of size-selected monodisperse nanoclusters on supported graphene studied by scanning tunneling microscopy and first-principles calcns.) Clusters (metal bonding, isomerism, and mobility of size-selected monodisperse nanoclusters on supported graphene studied by scanning tunneling microscopy and first-principles calcns.) Clusters Nanoparticles (nanoclusters bonding,
isomerism, and mobility of size-selected monodisperse nanoclusters on supported graphene studied by scanning tunneling microscopy and first-principles calcns.) size selected monodisperse nanocluster supported graphene bonding isomerism mobility STM first principles DFT calcn

Kongressstitel: CAN 157:645248 Surface Chemistry and Colloids 7440-05-3 (Palladium) Role: PEP (Physical, engineering or chemical process), PRP (Properties), PROC (Process) (bonding, isomerism, and mobility of size-selected monodisperse nanoclusters on supported graphene studied by scanning tunneling microscopy and first-principles calcns.); 1034343-98-0 (Graphene) Role: NUU (Other use, unclassified), PEP (Physical, engineering or chemical process), PRP (Properties), PROC (Process), USES (Uses) (bonding, isomerism, and mobility of size-selected monodisperse nanoclusters on supported graphene studied by scanning tunneling microscopy and first-principles calcns.); 150385-99-2; 151247-59-5; 151247-60-8 Role: PEP (Physical, engineering or chemical process), PRP (Properties), PROC (Process) (bonding, isomerism, and mobility of size-selected monodisperse nanoclusters on supported graphene studied by scanning tunneling microscopy and first-principles calcns.)

Zeitschriftentitel: Nano Lett.
Jahr: 2012
Band: 12
Heft / Issue: 11
Seiten: 5907-5912
Volltext / DOI: http://doi.org/10.1021/nl303319f

Occurences:
- Einrichtungen > Fakultäten > Fakultät für Chemie > Department Chemie > Lehrstuhl für Physikalische Chemie (Prof. Heiz) > current_papers > Arbeitsgruppe Physikalische Chemie (Prof. Heiz) > from_2004 [1342628] > Publications Esch only
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