

Journal of Physics

Condensed Matter

Volume 25 Number 44 6 November 2013

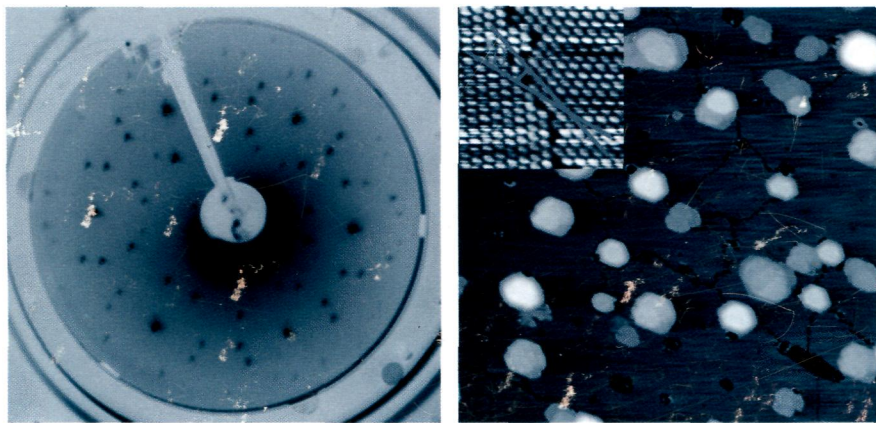
Featured in this issue

Surface, Interface and Atomic-Scale Science

Topical review

Novel behavior of monolayer quantum gases on graphene, graphane and fluorographene

Luciano Reatto, Davide E Galli, Marco Nava and Milton W Cole



SURFACE, INTERFACE AND ATOMIC-SCALE SCIENCE FAST TRACK COMMUNICATION

442001 Silicon sheets by redox assisted chemical exfoliation

Mohamed Rachid Tchalala, Mustapha Ait Ali, Hanna Enriquez, Abdelkader Kara, Abdessadek Lachgar, Said Yagoubi, Eddy Foy, Enrique Vega, Azzedine Bendounan, Mathieu G Silly, Fausto Sirotti, Serge Nitshe, Damien Chaudanson, Haik Jamgotchian, Bernard Aufray, Andrew J Mayne, Gérald Dujardin and Hamid Oughaddou

SURFACE, INTERFACE AND ATOMIC-SCALE SCIENCE TOPICAL REVIEW

443001 Novel behavior of monolayer quantum gases on graphene, graphane and fluorographene

Luciano Reatto, Davide E Galli, Marco Nava and Milton W Cole

SURFACE, INTERFACE AND ATOMIC-SCALE SCIENCE PAPERS

445001 The spatial diamond–graphite transition in detonation nanodiamond as revealed by small-angle neutron scattering

Mikhail V Avdeev, Victor L Aksenov, Oleksandr V Tomchuk, Leonid A Bulavin, Vasil M Garamus and Eiji Ōsawa

445002 Gold intercalation of boron-doped graphene on Ni(111): XPS and DFT study

W Zhao, J Gebhardt, K Gotterbarm, O Höfert, C Gleichweit, C Papp, A Görling and H-P Steinrück

445003 Carrier-mediated magnetism in transition metal doped Bi₂Se₃ topological insulator

Tome M Schmidt, R H Miwa and A Fazzio

445004 Iridium-modified Si(111) surface

Dylan Nicholls and Nuri Oncel

445005 Hot electron attenuation of direct and scattered carriers across an epitaxial Schottky interface

S Parui, P S Klandermans, S Venkatesan, C Scheu and T Banerjee

445006 Filling and wetting transitions at grooved substrates

Alexandr Malijevský

445007 Thermal transport in lattice-constrained 2D hybrid graphene heterostructures

Jun Song and Nikhil V Medhekar

445008 Free energies of (Co, Fe, Ni, Zn)Fe₂O₄ spinels and oxides in water at high temperatures and pressure from density functional theory: results for stoichiometric NiO and NiFe₂O₄ surfaces

C J O'Brien, Z Rák and D W Brenner

445009 Arbitrary tip orientation in STM simulations: 3D WKB theory and application to W(110)

Gábor Mándi, Norbert Nagy and Krisztián Palotás

445010 Dispersion corrections in graphenic systems: a simple and effective model of binding

Tim Gould, S Lebègue and John F Dobson

445011 Zero-temperature phase diagram of D₂ physisorbed on graphane

C Carbonell-Coronado, F De Soto, C Cazorla, J Boronat and M C Gordillo

445012 Sign-inverted response of aluminum work function to tangential strain

A Michl, J Weissmüller and S Müller

445013 Static or breakloose friction for lubricated contacts: the role of surface roughness and dewetting

B Lorenz, B A Krick, N Rodriguez, W G Sawyer, P Mangiagalli and B N J Persson

(Continued on inside back cover)

PAPERS

NANOSTRUCTURES AND NANOELECTRONICS

- 445301** **Lithium incorporation at the MoS₂/graphene interface: an *ab initio* investigation**
R H Miwa and W L Scopel

ELECTRONIC STRUCTURE

- 445401** **Atomistic simulations of stainless steels: a many-body potential for the Fe–Cr–C system**
K O E Henriksson, C Björkas and K Nordlund
- 445402** **Insulator–metal transition of VO₂ ultrathin films on silicon: evidence for an electronic origin by infrared spectroscopy**
W W Peng, G Niu, R Tétot, B Vilquin, F Raimondi, J B Brubach, E Amzallag, T Yanagida, S Autier-Laurent, P Lecoœur and P Roy

SUPERCONDUCTORS AND METALS

- 445701** **Dependence of global superconductivity on inter-island coupling in arrays of long SNS junctions**
Serena Eley, Sarang Gopalakrishnan, Paul M Goldbart and Nadya Mason
- 445702** **Spin fluctuations and pairing symmetry in A_xFe_{2–y}Se₂: dual effect of the itinerant and the localized nature of electrons**
Shun-Li Yu, Jia Guo and Jian-Xin Li

SEMICONDUCTORS

- 445801** **Thermal transport across metal–insulator interface via electron–phonon interaction**
Lifa Zhang, Jing-Tao Lü, Jian-Sheng Wang and Baowen Li

MAGNETISM AND MAGNETIC MATERIALS

- 446001** **Crystal field and magnetism of Pr³⁺ and Nd³⁺ ions in orthorhombic perovskites**
P Novák, K Knížek, M Maryško, Z Jiráček and J Kuneš