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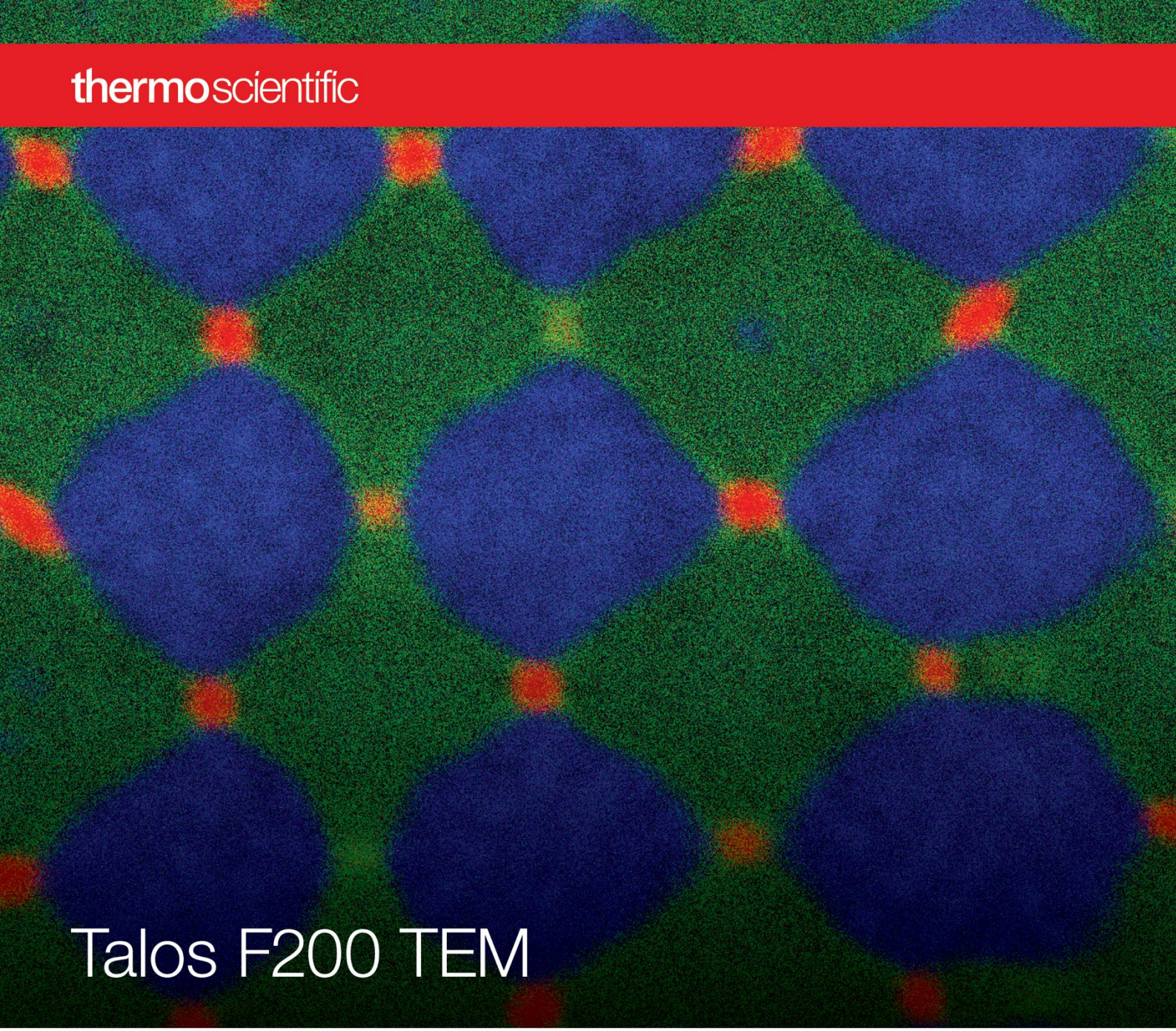

Talos F200 TEM

Publications

ThermoFisher SCIENTIFIC

Unsaturated-sulfur-rich MoS_2 nanosheets decorated on free-standing SWNT film: Synthesis, characterization and electrocatalytic application

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Reference:
Nano Research, July 2016, Volume 9, Issue 7, pp 2079–2087

DOI:
10.1007/s12274-016-1098-6

Microstructure Development in Electron Beam-Melted Inconel 718 and Associated Tensile Properties

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JOM, March 2016, Volume 68, Issue 3, pp 1012–1020

DOI:
10.1007/s11837-016-1812-6

Effect of oxygen and nitrogen on microstructure and mechanical properties of vanadium

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Materials Science and Engineering: A, Volume 675, 15 October 2016, Pages 92–98

DOI:
10.1016/j.msea.2016.08.040

Interface controlled micro- and macro- mechanical properties of aluminosilicate fiber reinforced SiC matrix composites

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Journal of the European Ceramic Society, Volume 37, Issue 3, March 2017, Pages 883–890

DOI:
10.1016/j.jeurceramsoc.2016.10.003

Effect of La addition on the particle characteristics, mechanical and electrical properties of in situ Cu-TiB_2 composites

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Journal of Alloys and Compounds, Volume 687, 5 December 2016, Pages 312–319

DOI:
10.1016/j.jallcom.2016.06.129

Indentation recovery in $GdPO_4$ and observation of deformation twinning

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AIP Advances, Volume 6, Issue 9

DOI:
10.1063/1.4964356

Structural and compositional analyses of $Cu(In,Ga)Se_2$ thin film solar cells with different cell performances

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Journal of Vacuum Science & Technology B, Nanotechnology and Microelectronics: Materials, Processing, Measurement, and Phenomena, Volume 34, Issue 3

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10.1116/1.4943518

Suppressing the cellular breakdown in silicon supersaturated with titanium

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Journal of Physics D: Applied Physics, Volume 49, Number 24

DOI:
10.1088/0022-3727/49/24/245104

Degradation of hydration kinetics of proton-conducting $Ba(Zr_{0.84}Y_{0.15}Cu_{0.01})O_{3-\delta}$ during conductivity-relaxation experiment

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Reference:
Journal of Power Sources, Volume 332, 15 November 2016, Pages 299–304

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10.1016/j.jpowsour.2016.09.129

Nanocharacterization of Strontium Titanate Thin Films and Oxide-Electrode Interfaces in Resistive Switching Devices

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Microsc. Microanal. 22 (Suppl 3), 2016

DOI:
10.1017/S1431927616008680

Nanoscale origins of the oriented precipitation of Ti_3Al in Ti-Al systems

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Scripta Materialia 125:34-38

DOI:
10.1016/j.scriptamat.2016.07.037

Characteristics of Surface Films Formed on Mg–Sn Alloys in NaCl Solution

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J. Electrochem. Soc. 2016 volume 163, issue 8, C395-C401

DOI:
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Thermal and mechanical properties of mechanically alloyed 304LSS-CNT metal matrix composites

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PVA-assisted synthesis and characterization of core–shell Bi nanobelts

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Materials Letters, Volume 161, 15 December 2015, Pages 144–148

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10.1016/j.matlet.2015.08.082

Improving NASICON Sinterability through Crystallization under High-Frequency Electrical Fields

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Energy Res., 31 March 2016

DOI:
10.3389/fenrg.2016.00013

Newly Designed $Cu/Cu_{10}Sn_3$ Core/Shell Nanoparticles for Liquid Phase-Photonic Sintered Copper Electrodes: Large-Area, Low-Cost Transparent Flexible Electronics

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Chem. Mater., 2016, 28 (13), pp 4714–472

DOI:
10.1021/acs.chemmater.6b01709

An efficient catalyst of manganese supported on diatomite for toluene oxidation: Manganese species, catalytic performance, and structure-activity relationship

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Microporous and Mesoporous Materials, Volume 239, February 2017, Pages 101–110

DOI:
10.1016/j.micromeso.2016.09.053

A modified sol–gel method for low-temperature synthesis of homogeneous nanoporous $La_{1-x}Sr_xMnO_3$ with large specific surface area

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Journal of Sol-Gel Science and Technology, January 2016, Volume 77, Issue 1, pp 109–118

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10.1007/s10971-015-3835-9

Ni-based structured catalyst for selective 3-phase hydrogenation of nitroaromatics

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Catalysis Today, Volume 273, 15 September 2016, Pages 244–251

DOI:
10.1016/j.cattod.2016.04.020

Ni-based structured catalyst for selective 3-phase hydrogenation of nitroaromatics

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Catalysis: The complexity of intimacy

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Reference:
Nature 528, 197–198 (10 December 2015)

DOI:
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A Facile Multi-interface Transformation Approach to Monodisperse Multiple-Shelled Periodic Mesoporous Organosilica Hollow Spheres

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Reference:J
Am Chem Soc. 2015 Jun 24;137(24):7935-44

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Design of Base Zeolite Catalysts by Alkali-Metal Grafting in Alcoholic Media

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ACS Catal., 2015, 5 (9), pp 5388–5396

DOI:
10.1021/acscatal.5b00761

Direct carbon coating at high temperature on $LiNi_{0.5}Mn_{1.5}O_4$ cathode: Unexpected influence on crystal structure and electrochemical performances

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10.1016/j.jpowsour.2015.04.137

Graphene oxide nanoparticle attachment and its toxicity on living lung epithelial cells

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RSC Adv., 2015,5, 59447-59457

DOI:
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Importance of hydrophilic pretreatment in the hydrothermal growth of amorphous molybdenum sulfide for hydrogen evolution catalysis.

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Reference:
Langmuir. 2015 May 12;31(18):5220-7

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10.1021/acs.langmuir.5b00205

Light emission from silicon with tin-containing nanocrystals

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AIP Advances 5, 077114 (2015)

DOI:
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Liquid phase epitaxy of binary III–V nanocrystals in thin Si layers triggered by ion implantation and flash lamp annealing

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J. Appl. Phys. 117, 175307 (2015)

DOI:
10.1063/1.4919775

Stabilization of iron by manganese promoters in uniform bimetallic FeMn Fischer–Tropsch model catalysts prepared from colloidal nanoparticles

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Catalysis, Structure & Reactivity, Volume 1, Issue 2 (April 2015), pp. 101-109

DOI:
10.1179/2055075815Y.0000000003

Thermal stability and structural evolution of quaternary Ti–Ta–B–N coatings

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Surface and Coatings Technology, Volume 259, Part C, 25 November 2014, Pages 698–706

DOI:
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Three-dimensional characterization of Gd nanoparticles using STEM-in-SEM tomography in a dual-beam FIB-SEM

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SPIE 9636, Scanning Microscopies 2015, 963606 (21 October 2015)

DOI:
10.1117/12.2195530

Stability of Y–Ti–O nanoparticles during laser melting of advanced oxide dispersion-strengthened steel powder

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Journal of Alloys and Compounds, Volume 653, 25 December 2015, Pages 528–533

DOI:
10.1016/j.jallcom.2015.08.273

Enhanced oxidation-resistant Cu-Ni core-shell nanowires: controllable one-pot synthesis and solution processing to transparent flexible heaters

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Reference:
Nanoscale. 2015 Oct 8;7(40):16874-9

DOI:
10.1039/c5nr04930j

Cover of Journal of the American Ceramic Society, volume 97, issue 9, September 4, 2014

"Overlay of atom probe reconstructions on a high resolution transmission electron microscopy image of Pb(Zr,Ti)O3. Atom probe tomographic analysis of PZT illustrated B-site cation clusters around 3 nm in radius; regions of Ti enrichment are shown in red and Zr-rich regions in blue. Atomic scale analyses of these oxides using APT and TEM has shown a correlation to their ferroelectric properties. Atom probe analysis was completed using a Cameca LEAP 4000 XSi at the Colorado School of Mines. HRTEM imaging was completed using an FEI TalosF200X by Yuri Rikers of FEI Co. in Eindhoven, the Netherlands. See feature article, " Quantifying Compositional Homogeneity In $Pb(Zr,Ti)O_3$ Using Atom Probe Tomography, " by R. Kirchhofer et al."

Influence of sol-gel derived ZrB_2 additions on microstructure and mechanical properties of SiBCN composites

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Ceramics International 43 (2017) 4372-4378

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10.1016/j.ceramint.2016.12.083

Effect of carbon reactant on microstructures and mechanical properties of TiAl/Ti_2AlC composites

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Materials Science & Engineering A 684 (2017) 406-412

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10.1016/j.msea.2016.12.069

Stability of YeTieO nanoparticles during laser melting of advanced oxide dispersion-strengthened steel powder

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Journal of Alloys and Compounds 653 (2015) 528-533

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10.1016/j.jallcom.2015.08.273

Effect of La addition on the particle characteristics, mechanical and electrical properties of in situ Cu-TiB_2 composites

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Journal of Alloys and Compounds 687 (2016) 312-319

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10.1016/j.jallcom.2016.06.129

Synergistic promotion of solar-driven H_2 generation by three-dimensionally ordered macroporous structured TiO_2-Au-CdS ternary photocatalyst

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Applied Catalysis B: Environmental 184 (2016) 182-190

DOI:
10.1016/j.apcatb.2015.11.018

Probing effective photocorrosion inhibition and highly improved photocatalytic hydrogen production on monodisperse PANI@CdS core-shell nanospheres

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Applied Satalysis B: Environmental 188 (2016) 351-359

DOI:
10.1016/j.apcatb.2016.02.017

Nanoscale origins of the oriented precipitation of Ti_3Al in Ti -- Al systems

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10.1016/j.scriptamat.2016.07.037

Ternary $FeNiS_2$ ultrathin nanosheets as an electrocatalyst for both oxygen evolution and reduction reactions

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A single wire as all-inclusive fully functional supercapacitor

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Reference:
Nano Energy 32 (2017) 201-208

DOI:
10.1016/j.nanoen.2016.12.020

2D AlN Layers Sandwiched Between Graphene and Si Substrates

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Reference:
Advanced Material 2019, 31

DOI:
10.1002/adma.201803448

Bimetallic Nanoparticle Oxidation in Three Dimensions by Chemically Sensitive Electron Tomography and in Situ Transmission Electron Microscopy

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Reference:
ACS Nano 2018, 12, 7866−7874

DOI:
10.1021/acsnano.8b02170

Mechanistic Origin of the High Performance of Yolk@Shell Bi_2S_3@N-Doped Carbon Nanowire Electrodes

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Reference:
ACS Nano 2018, 12, 12597−12611

DOI:
10.1021/acsnano.8b07319

Enhanced Drug Delivery by Nanoscale Integration of a Nitric Oxide Donor To Induce Tumor Collagen Depletion

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Reference:
Nano Lett. 12.279

DOI:
10.1021/acs.nanolett.8b04236

Enhanced Charge Transfer by Passivation Layer in 3DOM Ferroelectric Heterojunction for Water Oxidation in HCO_3^-/CO_2 System

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10.1002/smll.201804930

Visualization of fast “hydrogen pump” in coreshell nanostructured Mg@Pt through hydrogen-stabilized Mg_3Pt

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Reference:
Journal of Materials Chemistry A 10.733

DOI:
10.1039/C9TA03038G

Using CoS cathode materials with 3D hierarchical porosity and an ionic liquid (IL) as an electrolyte additive for high capacity rechargeable magnesium batteries

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Reference:
Journal of Materials Chemistry A 10.733

DOI:
10.1039/C9TA05233J

Vacancy modification of Prussian-blue nano-thin films for high energy-density micro-supercapacitors with ultralow RC time constant

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Nano Energy 15.548

DOI:
10.1016/j.nanoen.2019.03.042

All-solution processed inverted green quantumdot light-emitting diodes with concurrent high efficiency and long lifetime

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Reference:
Materials Horizons 14.356

DOI:
10.1039/C9MH01053J

Codoping Enhanced Radioluminescence of Nanoscintillators for X ray-Activated Synergistic Cancer Therapy and Prognosis Using Metabolomics

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Reference:
ACS nano 13.903

DOI:
10.1021/acsnano.9b04213

Umbrella-like CdS single crystal: exposed (002) facets and enhanced photocatalytic properties

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J Mater Sci (2020) 55:11167–11176

Multimaterial 3D Printing for Arbitrary Distribution with Nanoscale Resolution

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Multifunctionality of silver closo-boranes

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Link:
https://www.nature.com/articles/ncomms15136

Reference:

Nat. Commun. 8, 15136

DOI:

10.1038/ncomms15136 (2017).

Sequential delithiation behavior and structural rearrangement of a nanoscale composite-structured $Li_{1.2}Ni_{0.2}Mn_{0.6}O_2$ during charge–discharge cycles

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Link:
https://www.nature.com/articles/ncomms15136

Reference:

Scientific Reports | *(2020) 10:10048*

DOI:

/10.1038/s41598-020-66411-0 (2020)

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Notes

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