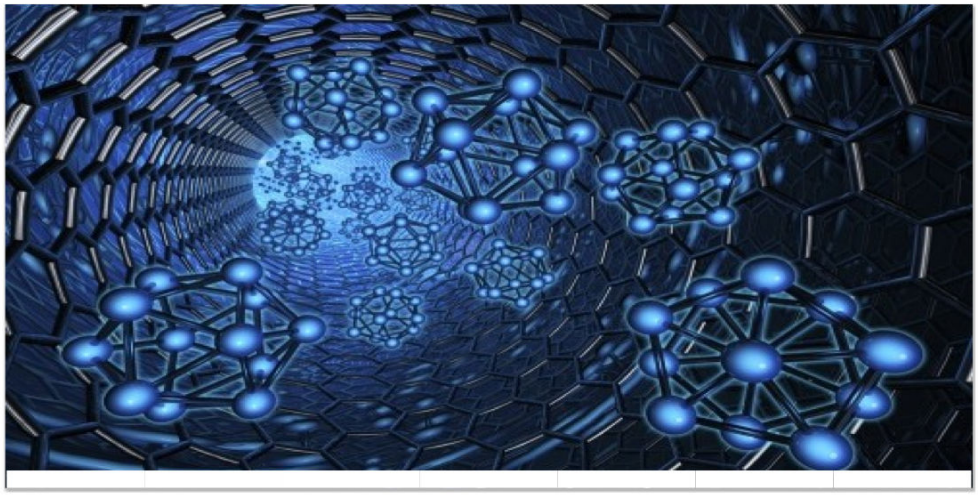
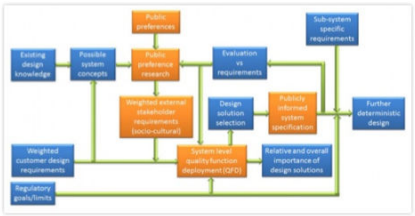
Advances In ENGINEERING

LATEST ENGINEERING RESEARCH On the Usage of Spectral and Broadband Satellite Instrument Measurements to Differentiate Climate Models with Different Cloud Feedback Stre



CHEMICAL ENGINEERING



A system design framework for the integration of public preferences into the design of large infrastructure projects

May 24, 2014

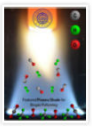
Process Safety and Environmental Protection, 18 December 2013. Martin J. Goodfellow, Jonathan Wortley, Adisa Azapagic. **Read More**

A simple route to Bi2Se3 and Bi2Te3 nanocrystals

May 24, 2014

Separation performance of PEBAX/PEI hollow fiber composite membrane for SO2/CO2/N2 mixed gas

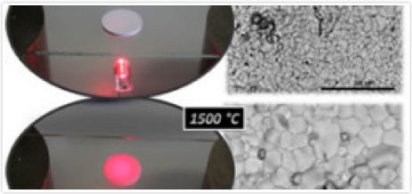
May 19, 2014



Renewable and high-concentration syngas production from oxidative reforming of simulated biogas with low energy cost ina plasma shade

May 13, 2014

MATERIALS ENGINEERING



Sintering behaviour and translucency of dense Eu2O3 ceramics

June 1, 2014

Journal of the European Ceramic Society, Volume 34, Issue 7, July 2014, Pages 1803 1808. Adri n ... **Read More**

Study of organic contamination induced by outgassing materials. Application to the Laser M gaJoule optics

June 1, 2014

Ferromagnetic Schottky junctions using half-metallic Co2MnSi/diamond heterostructures

June 1, 2014

Se concentration dependent band gap engineering in ZnO1-xSex thin film for optoelectronic applications

May 19, 2014

Suppression of thermal conductivity in InxGa1−xN alloys

GENERAL ENGINEERING

On the Usage of Spectral and Broadband Satellite Instrument Measurements to Differentiate Climate Models with Different Cloud Feedback Strengths

May 25, 2014

Choosing the Appropriate Integration App roach in Systems Projects

May 24, 2014

Solid state phase transformation study on a series of Pu Ga alloys containing 0.18 0.63 wt.% Ga

May 24, 2014

A novel approach to software quality risk management

May 24, 2014

Angular momentum blockade in nanoscale high-Tc superconducting grains

May 24, 2014

Silicide phases formation in Co/c-Si and Co/a-Si systems during thermal annealing

May 24, 2014

Stress-mediated magnetic anisotropy and magnetoelastic coupling in epitaxial multiferroic PbTiO3-CoFe2O4 nanostructures

May 24, 2014

An Approach to Accurate Inversion of Convolution Transforms by FIR Filters

May 24, 2014

High-speed multi-THz-range mode-hop-free tunable mid-IR laser spectrometer

May 24, 2014

FEATURED COMPANIES

CIVIL ENGINEERING

FERROMAGNETIC SCHOTTKY JUNCTIONS USING HALF-METALLIC CO2MNSI/DIAMOND HETEROSTRUCTURES

Appl. Phys. Lett. 103, 052408 (2013).

K. Ueda, T. Soumiya, M. Nishiwaki, H. Asano.

Department of Crystalline Materials Science, Graduate School of Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya 464-8603, Japan.

Abstract

We demonstrate half-metallic Heusler Co_2MnSi films epitaxially grown on diamond semiconductors using the ion-beam assisted sputtering method. Lower temperature growth below ~400 C is key for obtaining abrupt Co_2MnSi/diamond interfaces. The Co_2MnSi films ondiamond showed a negative anisotropic magnetoresistance of ~0.2% at 10 K, suggesting the half-metallic nature of the Co_2MnSi films. Schottky junctions formed using the Co_2MnSi/diamond heterostructures at 400 C showed clear rectification properties with arectification ratio of $\sim 10^3$. The Schottky barrier heights of the Co_2MnSi/diamond interfaces were estimated to be ~0.8 eV. These results indicate that Co_2MnSi is a promising spin source for spin injection into diamond.

Go to Journal

GENERAL ENGINEERING

On the Usage of Spectral and Broadband Satellite Instrument Measurements to Differentiate Climate Models with Different Cloud Feedback Strengths
May 25, 2014

Choosing the Appropriate Integration App roach in Systems Projects
May 24, 2014

Solid state phase transformation study on a series of Pu Ga alloys containing 0.18 0.63 wt.% Ga
May 24, 2014

A novel approach to software quality risk management
May 24, 2014

Angular momentum blockade in nanoscale high-Tc superconducting grains
May 24, 2014

Silicide phases formation in Co/c-Si and Co/a-Si systems during thermal annealing
May 24, 2014

Stress-mediated magnetic anisotropy and magnetoelastic coupling in epitaxial multiferroic PbTiO3-CoFe2O4 nanostructures
May 24, 2014

An Approach to Accurate Inversion of Convolution Transforms by FIR Filters
May 24, 2014

High-speed multi-THz-range mode-hop-free tunable mid-IR laser spectrometer
May 24, 2014

FEATURED COMPANIES

CIVIL ENGINEERING

Using stakeholders narratives to build an agent-based simulation of a political process