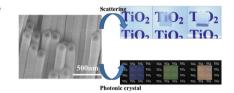
## In this issue

Jia Lin, Xiaolin Liu, Shu Zhu and Xianfeng Chen

TiO<sub>2</sub> nanotube structures for the enhancement of photon utilization in sensitized solar cells

DOI 10.1515/ntrev-2014-0028 Nanotechnol Rev 2015; 4(3): 209–238 **Review:** Novel anodic TiO<sub>2</sub> nanotube structures are promising for the enhancement of photon conversion when incorporated in higherficiency sensitized solar cells.

**Keywords:** light harvesting; light scattering; microstructure; photonic crystal; TiO, nanotubes.

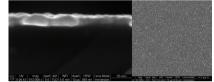


Radu Malureanu and Andrei Lavrinenko Ultra-thin films for plasmonics: a technology overview

DOI 10.1515/ntrev-2015-0021 Nanotechnol Rev 2015; 4(3): 259–275 **Review:** This article presents a general survey of the various possibilities for depositing ultra-thin and extremely smooth layers to be used for plasmonic applications in the visible and infra-red range, as well as the results obtained when applying these techniques.

**Keywords:** plasmonics; ultra-thin films; VIS/IR range.

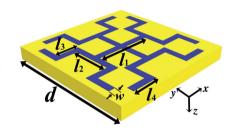




Shiwei Tang, Qiong He, Shiyi Xiao, Xueqin Huang and Lei Zhou Fractal plasmonic metamaterials: physics and applications

DOI 10.1515/ntrev-2014-0025 Nanotechnol Rev 2015; 4(3): 277–288 Review: The article reviews recent work by the author group on a particular type of metamaterials (MTMs) composed of metallic plates drilled with periodic arrays of subwavelength fractal-like apertures, which can be used as superlens or hyperlens and to enhance lightmatter interactions.

**Keywords:** light-matter interaction; metamaterials; mode expansion; surface plasmon.



Hongyan Liang, Hong Wei, Deng Pan and Hongxing Xu

## Chemically synthesized noble metal nanostructures for plasmonics

DOI 10.1515/ntrev-2014-0026 Nanotechnol Rev 2015; 4(3): 289-302 Review: Some novel metal nanostructures synthesized by wet chemical methods and their fundamental plasmonic properties are discussed, and some applications of these nanostructures in plasmonics, including surfaceenhanced Raman spectroscopy, plasmonic sensing, optical nanoantennas, and plasmonic circuitry are highlighted.

**Keywords:** nanoantenna; nanowire; plasmonic circuitry; plasmonic sensing; surface-enhanced Raman spectroscopy; surface plasmons.

