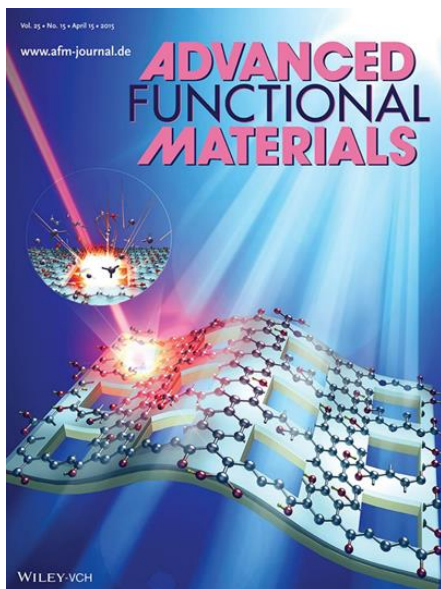


7. PUBLISHED WORK

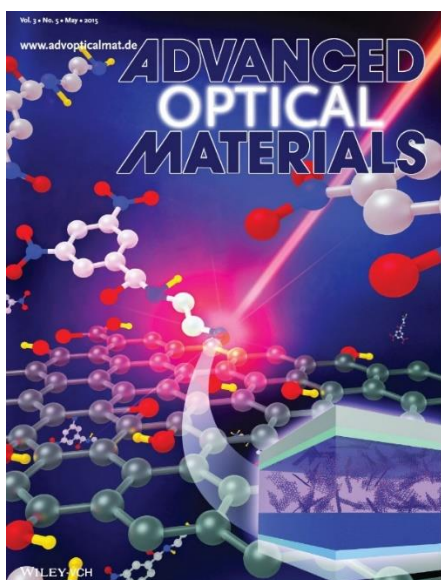
7.1 COVERS



1. *Inside Front Cover*

Reduced Graphene Oxide Micromesh Electrodes for Large Area, Flexible, Organic Photovoltaic Devices (Adv.Funct.Mater. 25,15, page 2206
APR 2015 | DOI: 10.1002/adfm.201570101

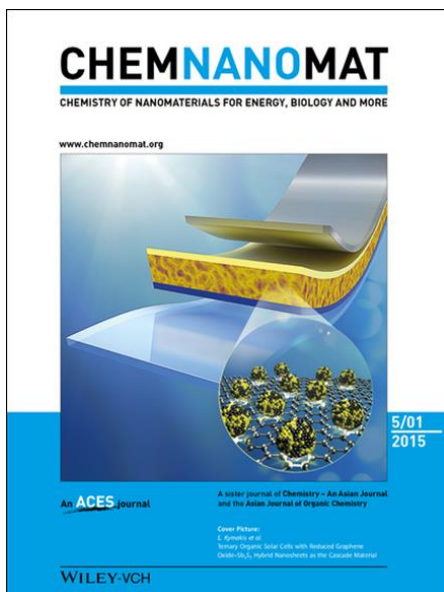
A facile, one step, roll-to-roll compatible laser patterning technique to improve and simultaneously tune the optoelectronic properties of graphene based transparent conductive electrodes (TCE) is demonstrated by E. Stratakis, E. Kymakis, and colleagues on page 2213. In order to overcome the trade-off between the sheet resistance and transparency, reduced graphene oxide micromeshes are laser-patterned on plastic substrate and incorporated in flexible organic photovoltaic devices as the TCE.



2. *Inside Front Cover*

Photochemical Synthesis of Solution-Processable Graphene Derivatives (Adv. Optical Mater. 3, 5, page 596)
MAY 2015 | DOI: 10.1002/adom.201570027

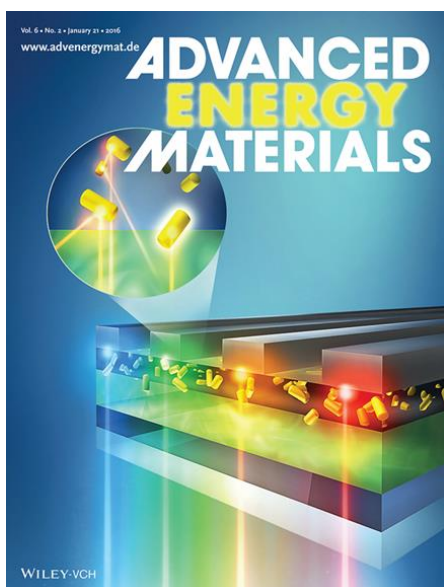
The artwork represents the photochemical reaction for the synthesis of a graphene-based electron-accepting derivative. Ethylene-dinitro-benzoyl small molecules are shown in the vicinity of a graphene oxide nanosheet, one of which is preferentially bonded to the graphene oxide lattice under the photochemical action of a laser beam. On page 658, E. Kymakis, E. Stratakis, and co-workers use this photochemical synthetic route to create graphene-based electron acceptors with tunable bandgaps for organic solar cells.



3. Back Cover

Ternary Organic Solar Cells with Reduced Graphene Oxide–Sb₂S₃ Hybrid Nanosheets as the Cascade Material (ChemNanoMat 1,5, page 364)
SEP 2015 | DOI: 10.1002/cnma.201500117

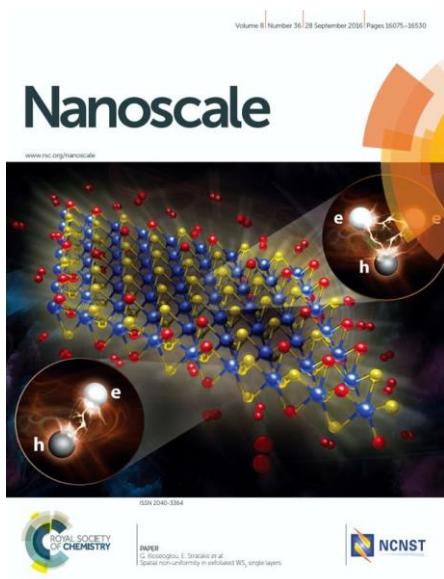
The Back Cover illustrates the use of reduced graphene oxide-antimony sulfide (rGO-Sb₂S₃) hybrid nanosheets as the cascade material in ternary organic solar cells. Their utilization in PCDTBT:PC71BM blend leads to power conversion efficiency of 6.81%; a value 23% higher than the efficiency of the binary devices. The results demonstrate that the exploitation of on-demand functionalized graphene derivatives as electron cascade materials is a promising way towards improving the performance of organic photovoltaics. More details can be found in the Full Paper on page 346 in Issue 5, 2015



4. Back Cover

Plasmonic Backscattering Effect in High Efficient Organic Photovoltaic Devices (Adv. Energy Mater 6,2 2016)
JAN 2015 | DOI: 10.1002/aenm.201670013

A new light trapping architecture to enhance the power conversion efficiency of organic photovoltaics is proposed and implemented. In article number 1501640, Emmanuel Kymakis and co-workers demonstrate that the incorporation of gold nanorods inside the rear buffer layer, leads to the redistribution of photons inside the active medium mainly through efficient light back-scattering, simultaneously increasing the exciton generation and charge collection.



5. Front cover

Spatial non-uniformity in exfoliated WS₂ single layers (Nanoscale, 2016,8, 16075-16076)
SEP 2016 | DOI: 10.1039/C6NR90196D

Extraordinary spatial non-uniformity of the photoluminescence (PL) and strain properties of exfoliated WS₂ monolayers. PL enhancement of the outer regions is attributed to the pronounced oxygen chemisorption and physisorption.

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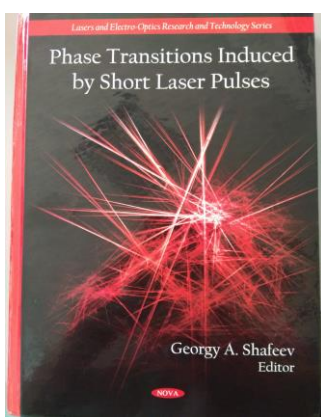
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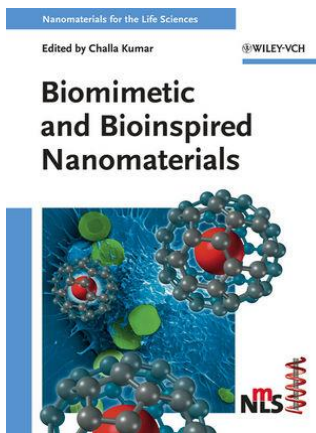
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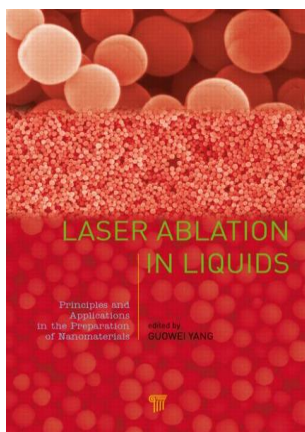


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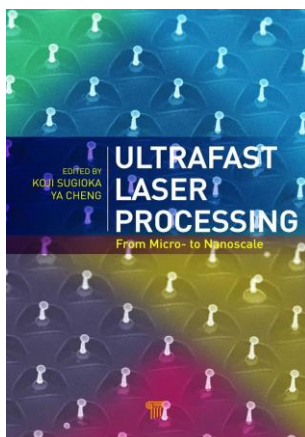
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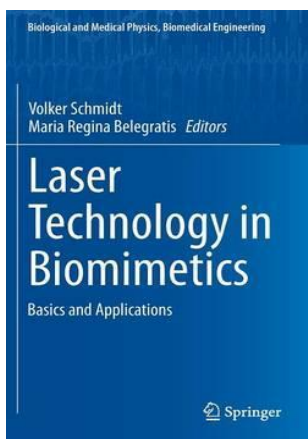
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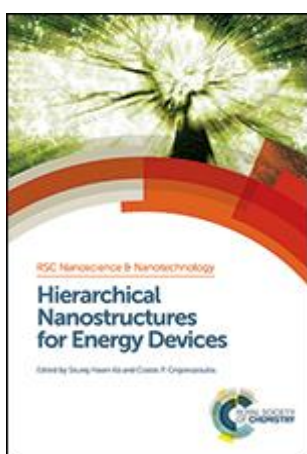
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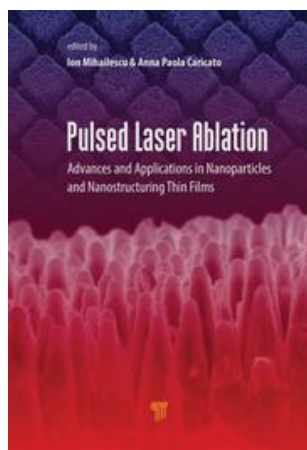
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