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**


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**
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.
7.2 PUBLICATIONS IN PEER-REVIEWED JOURNALS

* Indicates Corresponding Author


1 Virtual Journal of Nanoscale Science and Technology, 21, 6 (2010).
54. ‘Laser-assisted nanostructuring of Tungsten in liquid environment’ Barmina, EV; Stratakis E; Barberoglou, M; Stolyarov, VN; Stolyarov, IN; Fotakis, C; Shafeev, GA, APPLIED SURFACE SCIENCE 258 (2012) 5898-5902.
55. ‘Organic bulk heterojunction photovoltaic devices with surfactant-free Au nanoparticles embedded in the active layer’ Spyropoulos, GD; Stylianakis, MM; Stratakis* E; Kymakis, E APPLIED PHYSICS LETTERS 100 (2012) 213904.
57. ‘Dynamics of ripple formation on silicon surfaces by ultrashort laser pulses in subablation conditions’ Tsibidis, GD; Barberoglou, M; Loukakos, PA; Stratakis E; Fotakis, C. PHYSICAL REVIEW B 86 (2012) 115316.
58. ‘Porous nanoparticles of Al and Ti generated by laser ablation in liquids’, Kuzmin, PG; Shafeev, GA; Viau, G; Warot-Fonrose, B; Barberoglou, M; Stratakis E; Fotakis, C. APPLIED SURFACE SCIENCE 258, (2012) 9283-9287.
71. ‘Synergetic plasmonic effect of Al and Au nanoparticles for efficiency enhancement of air processed organic photovoltaic devices’ G Kakavelakis, E Stratakis, E Kymakis Chemical Communications 50 (40), 5285-5287 (2014).
74. ‘Elastic constants, viscosity and response time in nematic liquid crystals doped with ferroelectric nanoparticles’ N Podoliak, O Buchnev, M Herrington, E Mavrona, M Kaczmarek


92. ‘High Electron Mobility Thin-Film Transistors Based on Solution-Processed Semiconducting Metal Oxide Heterojunctions and Quasi-Superlattices’, Lin Y.H., Faber H., Labram J.G.,

93. 'Ternary organic solar cells with reduced graphene oxide-Sb2S3 hybrid nanosheets as the cascade material', Balis N., Konios D., Stratakis E., Kymakis E., (2015), ChemNanoMat, 1, 346.


*vi Appeared in the back cover of ChemNanoMat


viii Appeared in the front cover of Nanoscale


7.3 CONFERENCE PAPERS IN PEER-REVIEWED JOURNALS

7. ‘Laser control of the properties of nanostructures on Ta and Ni under their ablation in liquids’ E. V. Barmina, M. Barberoglou, V. Zorba, A. V. Simakin, E. Stratakis, C. Fotakis and G. A...


7.4 PAPERS IN REFEREED CONFERENCE PROCEEDINGS

More than 30. The most representative ones are shown below:


7.5 INVITED CHAPTERS IN BOOKS


### 7.6 INVITED REVIEW ARTICLES


^ix^ Most Cited Biomicrofluidics Articles  
^x^ Most Cited Materials Today Articles

7.7 MONOGRAPHS