

Supplementary Material for Journal of Materials Chemistry

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Supplementary material (ESI) for Journal of Materials Chemistry

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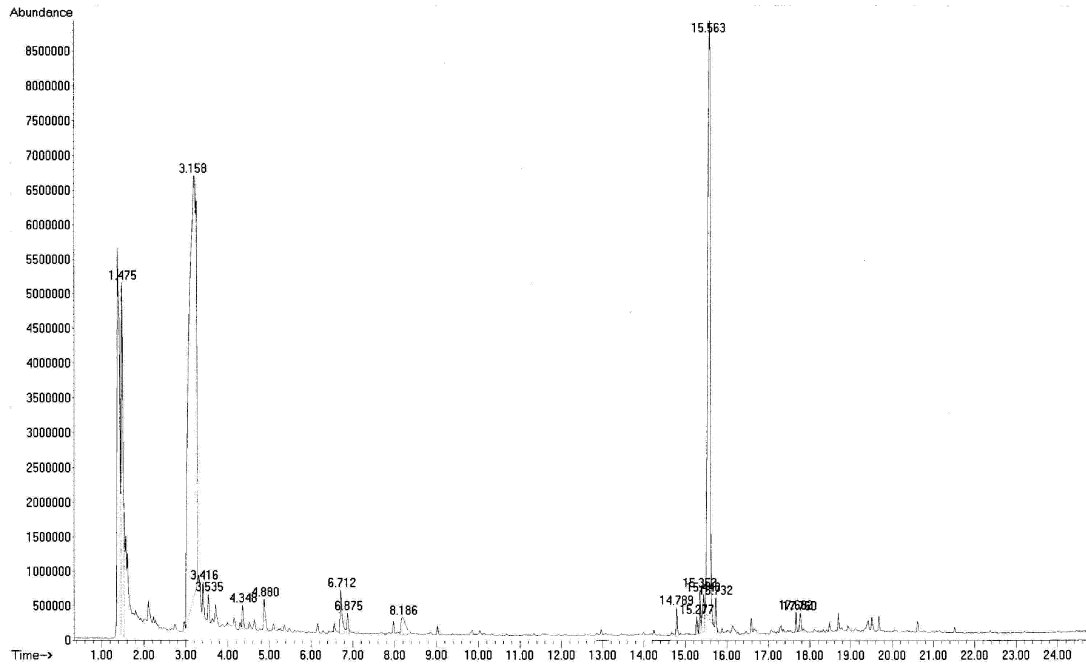
Facile synthesis of high-soluble surface-grafted all-single-layer graphene oxide as hole-injecting buffer material in organic light-emitting diodes

Ze Zhong, Yanfeng Dai, Dongge Ma, and Zhi Yuan Wang*

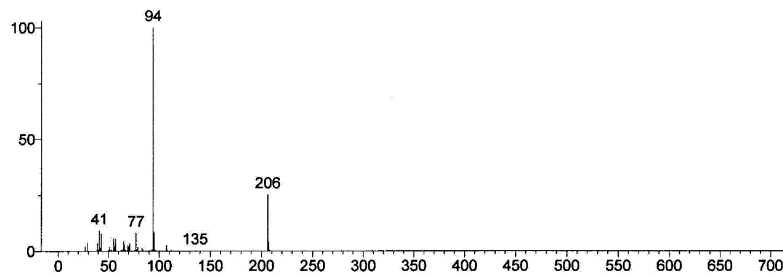
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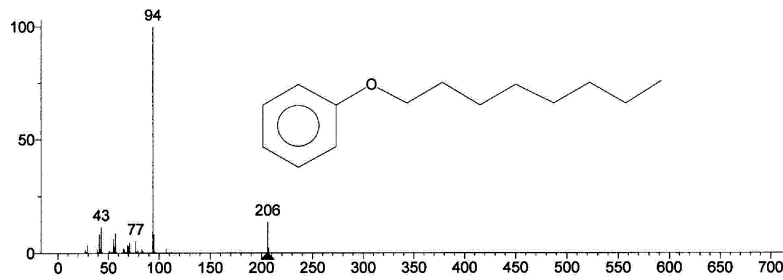
Supplementary information



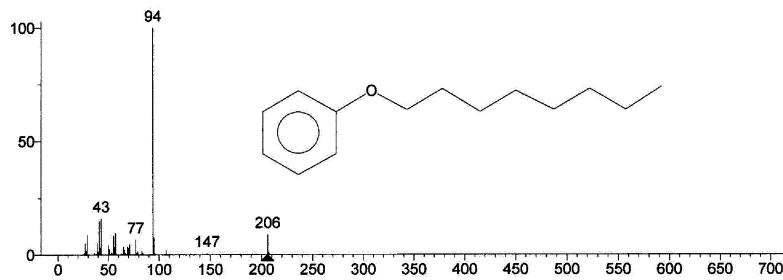
Unknown: Scan 1429 (15.570 min): Y-1-2010-9.2.D\data.ms (-1420)
Compound in Library Factor = 522



Hit 1 : Benzene, (octyloxy)-
C₁₄H₂₂O; MF: 966; RMF: 967; CAS: 1818-07-1; Lib: mainlib; ID: 52623.



Hit 2 : Benzene, (octyloxy)-
C₁₄H₂₂O; MF: 927; RMF: 929; CAS: 1818-07-1; Lib: replib; ID: 12175.



peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.475	127	129	134	rM 2	5088481	15547188	20.87%	10.906%
2	3.156	269	284	297	rBB2	6045535	74486033	100.00%	52.250%
3	3.416	305	308	313	rM	493537	985856	1.32%	0.692%
4	3.535	316	319	325	rM 2	407464	841487	1.13%	0.590%
5	4.348	393	394	401	rM	343693	699492	0.94%	0.491%
6	4.880	436	443	456	rM 2	453656	1371246	1.84%	0.962%
7	6.712	609	612	621	rM	629234	2015203	2.71%	1.414%
8	6.875	624	627	631	rM	297787	674182	0.91%	0.473%
9	8.186	743	748	765	rM 3	243284	1942223	2.61%	1.362%
10	14.789	1353	1357	1364	rM	411317	836326	1.12%	0.587%
11	15.277	1397	1402	1405	rM	252401	501188	0.67%	0.352%
12	15.353	1406	1409	1411	rM	625444	1212725	1.63%	0.851%
13	15.440	1411	1417	1419	rM 2	537373	1770600	2.38%	1.242%
14	15.559	1420	1428	1440	rBB	8643382	37521840	50.37%	26.320%
15	15.732	1441	1444	1447	rM	512597	983799	1.32%	0.690%
16	17.662	1619	1622	1625	rM	289622	496113	0.67%	0.348%
17	17.760	1628	1631	1638	rM 2	261041	672117	0.90%	0.471%

Sum of corrected areas: 142557618

Figure S1. Pyrolysis-GC/MS of P-GO (sample B)

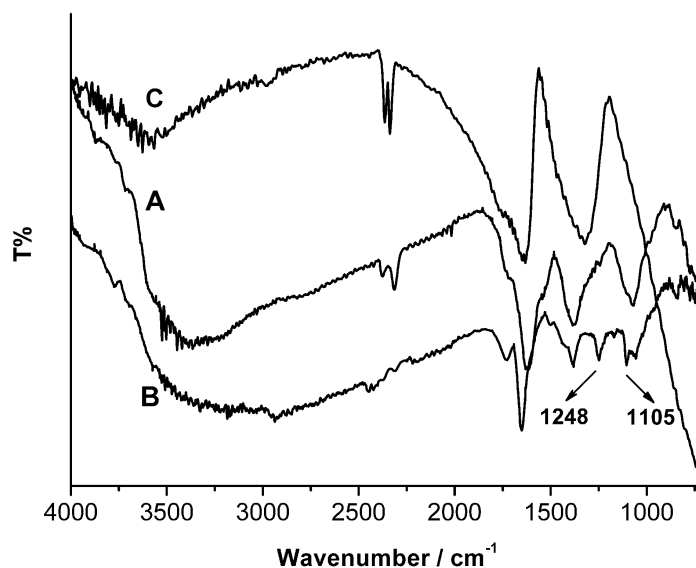


Figure S2. IR spectra of (A) graphite oxide, (B) P-GO (sample B) and (C) chemically reduced P-GO

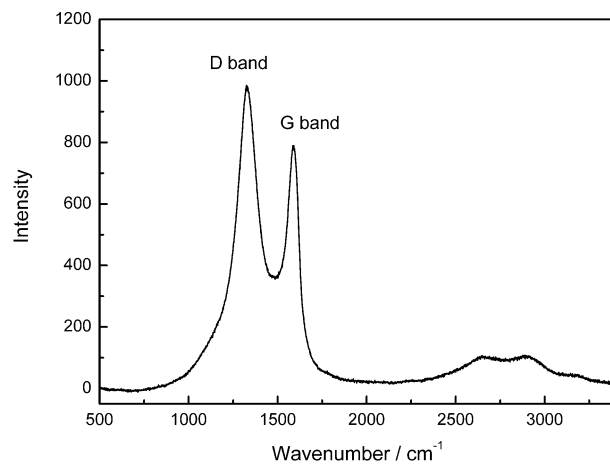


Figure S3. Raman spectrum (633 nm laser excitation) of P-GO (sample B; powder)

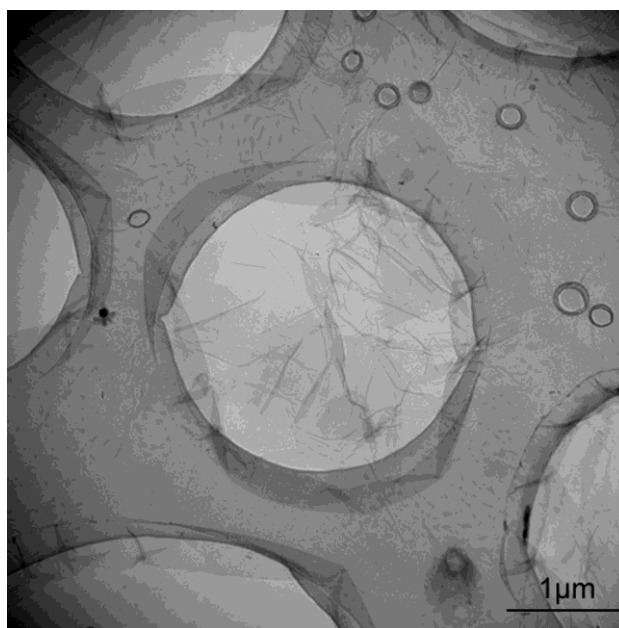


Figure S4. TEM image of P-GO sheets on lacey support film

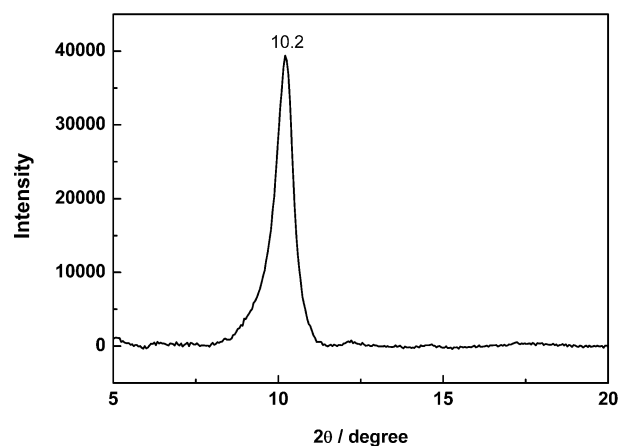


Figure S5. XRD spectrum of graphite oxide

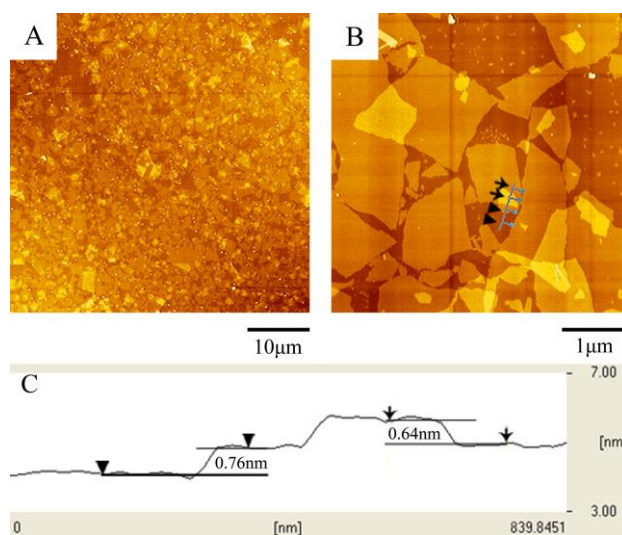


Figure S6. AFM images of chemically reduced graphene on freshly cleaved mica. A) $20 \times 20 \mu\text{m}$. B) $5 \times 5 \mu\text{m}$. C) Height profile of GO sheets in B)

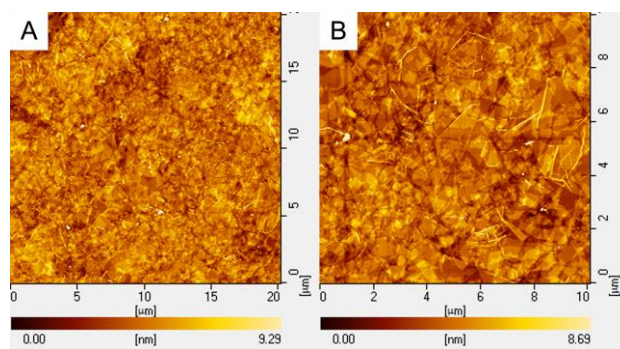


Figure S7. AFM images of P-GO (sample C) films spin-coated on freshly cleaved mica. (A) $20 \times 20 \mu\text{m}$. (B) $10 \times 10 \mu\text{m}$.