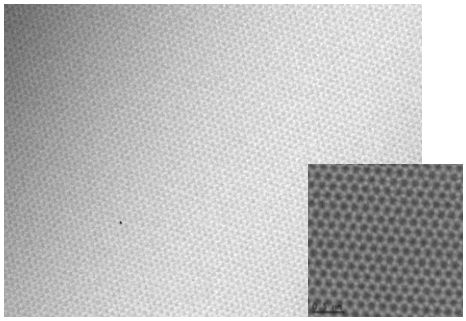
Graphene on Quartz glass

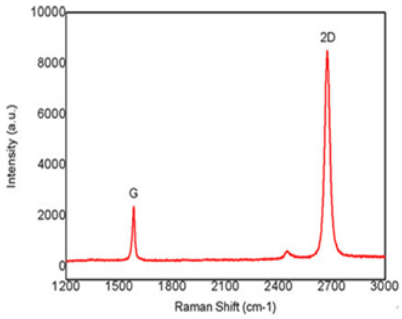
10mm X 10mm, 20ea

Product Size	Up to 80 x 150 ㎟
Film Morphology	Continuous Monolayer (>95%)
Sheet Resistance	Av. < 250~400 Ω/sq
Mobility	>3500 cm2/Vs
Transmittance	>97%
Substrate	Quartz glass (variable thickness)
Domain Size	10-30 ㎛

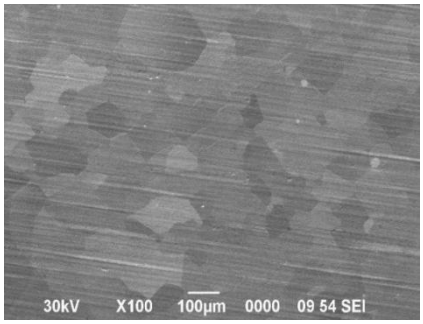
High-Resolution TEM Images



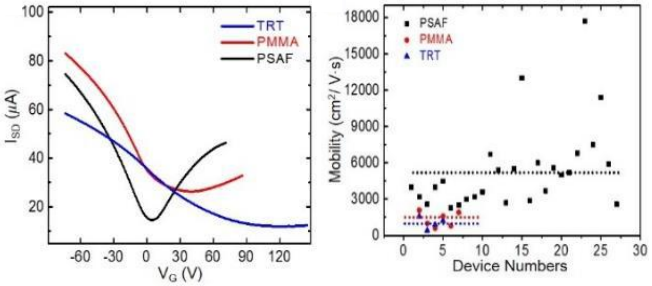
Raman Spectrum



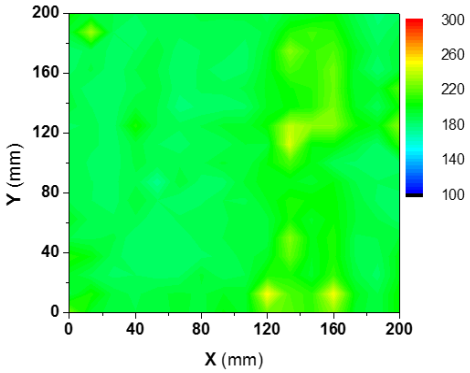
SEM Image of Graphene on Cu



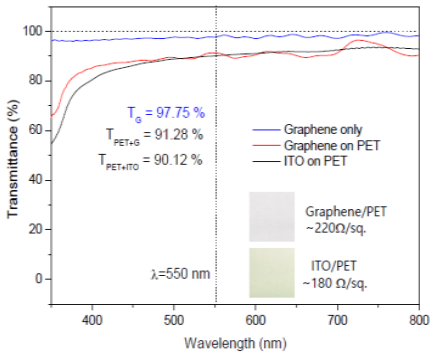
Electrical Properties



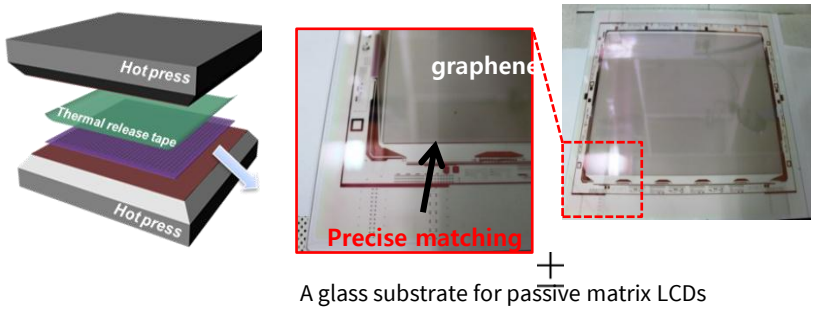
Sheet Resistance Uniformity



Optical Transmittance



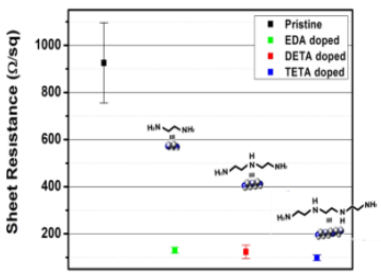
Transfer of Graphene onto Rigid Substrates by Hot Pressing



A glass substrate for passive matrix LCDs

N-doped Graphene for Low Sheet Resistance Applications

	Pristine	EDA doped	DETA doped	TETA doped
Dirac Voltage(Vg)	1.37±2.27	-126.64±6.06	-166.37±1.78	-192.27±6.49
Carrier Concentration(10^{13})	0.01±0.016	-0.912±0.043	-1.198±0.013	-1.384±0.047
Mobility(h)[cm^2/Vs]	6219±1288			
Mobility(e)[cm^2/Vs]	3809±876	3711±913	3388±531	2817±475
Sheet resistance(Ohm/sq)	925±170	130±12	124±28	98±12



Reference

(1) S. Kim et. al. Ultra-Clean Patterned Transfer of Single-Layer Graphene by Recyclable Pressure Sensitive Adhesive Films. Nano Lett. (accepted).

(2) S. Bae*, H. Kim* et al. Roll-to-roll production of 30 inch graphene films for transparent electrodes Nature Nanotech. 5, 574 (2010).

(3) J. Kang et al. Efficient Transfer of Large-Area Graphene Films onto Rigid Substrates by Hot Pressing. ACS Nano 6, 53060-5365 (2012)

(4) Y. Kim et al. Vapor-Phase Molecular Doping of Graphene for High-Performance Transparent Electrodes. ACS Nano, 8 , 868–874 (2014).