

Supplementary information

Conductive textiles prepared by spray coating of water-based graphene dispersions

Archana Samanta^a, Romain Bordes^{a*}

^aDepartment of Chemical Engineering, Chalmers University of Technology, Gothenburg, Sweden

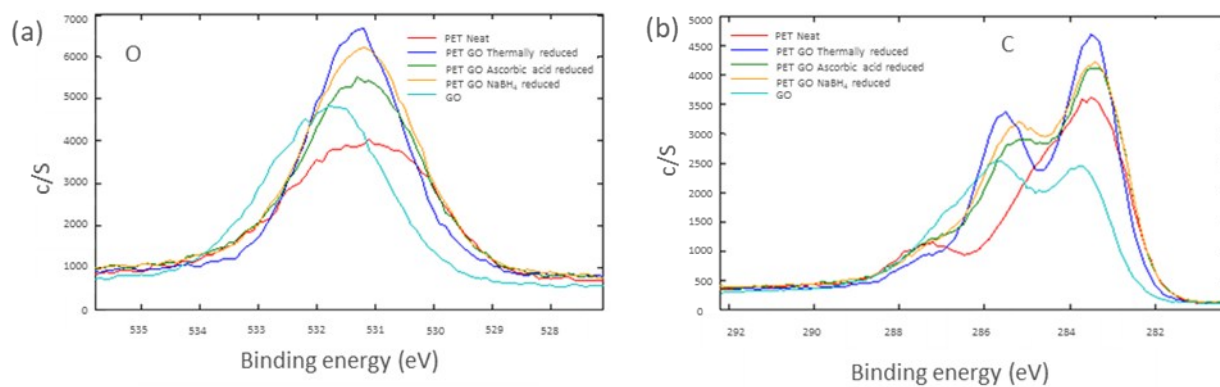


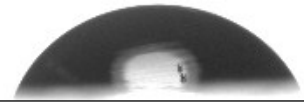


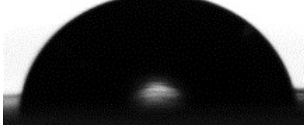







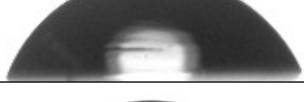

Figure S1. XPS data of samples. (a) high resolution oxygen peaks of samples. (b) high resolution carbon peaks of respective samples.

Table S1. Surface conductivity of samples after 10 washes.

Sample code	Surface conductivity (mS/m) Un-washed	Surface conductivity (mS/m) After 10 washes
SE1	-- ^c	-- ^c
SE2	-- ^c	-- ^c
SE3	0.31±.07	0.29±.09
SE4	0.37±.05	0.35±.05
SE5	0.45±.11	0.43±.07
S1	-- ^c	-- ^c
S2	0.37±.09	0.34±.10
S3	0.48±.10	0.46±.07
S4	0.69±.07	0.66±.05
S5	2.38±.11	2.16±.14
SA1	0.48±.11	0.46±.08
SA2	0.55±.08	0.53±.07
SA3	0.83±.09	0.79±.07
SN1	0.37±.06	0.35±.05
SN2	0.48±.08	0.45±.03
SN3	0.69±.07	0.66±.06
B1	0.41±.07	0.39±.05
B2	0.53±.04	0.50±.04
B3	1.28±.09	1.19±.07
PETN	-- ^c	-- ^c

^c Surface resistance was too high to be measured by the instrument

Table S2. Contact angle values of rGO textiles.

Sl.No	Sample details	Contact angle
SE1		$65^{\circ}\pm 11$,
SE2		$68^{\circ}\pm 7$
SE3		$74^{\circ}\pm 8$
SE4		$76^{\circ}\pm 10$
SE5		$76^{\circ}\pm 14$
S1		$69^{\circ}\pm 7$
S2		$71^{\circ}\pm 8$
S3		$71^{\circ}\pm 3$
S4		$75^{\circ}\pm 2$
S5		$79^{\circ}\pm 8$
SA1		$70^{\circ}\pm 5$
SA2		$73^{\circ}\pm 4$
SA3		$74^{\circ}\pm 2$



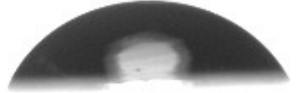




SN1		$68^{\circ}\pm 3$
SN2		$77^{\circ}\pm 3$
SN3		$64^{\circ}\pm 4$
B1		$65^{\circ}\pm 8$
B2		$66^{\circ}\pm 5$
B3		$72^{\circ}\pm 7$
PETN		$110^{\circ}\pm 2$

Table S3. Tensile properties of GO coated samples

Sample	Tensile stress (Mpa)	Tensile strain (mm/mm)
PET neat	58±6	0.9±0.04
PET neat annealed	61±5	0.76±0.03
PET + GO	60±4	0.82±0.05
PET NaBH ₄	68±5	0.70±0.04
PET ascorbic acid	71±4	0.66±0.03
PET GO annealed	79±5	0.54±0.02