Supplementary Information

Highly Stretchable Strain Sensors Based on Graphene/Silver Nanoparticles Synergic Conductive Networks and Sandwich Structure

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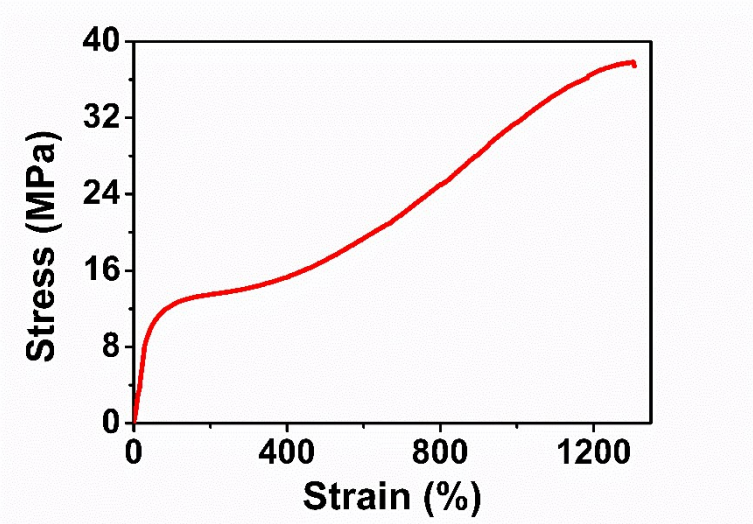

Fig. S1 Stress-strain curve of TPU at room temperature.

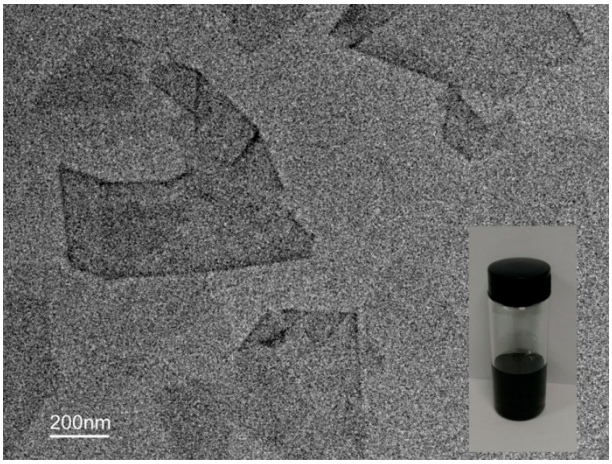

Fig. S2 TEM images of graphene. Inset is the digital photograph of graphene NMP suspension.

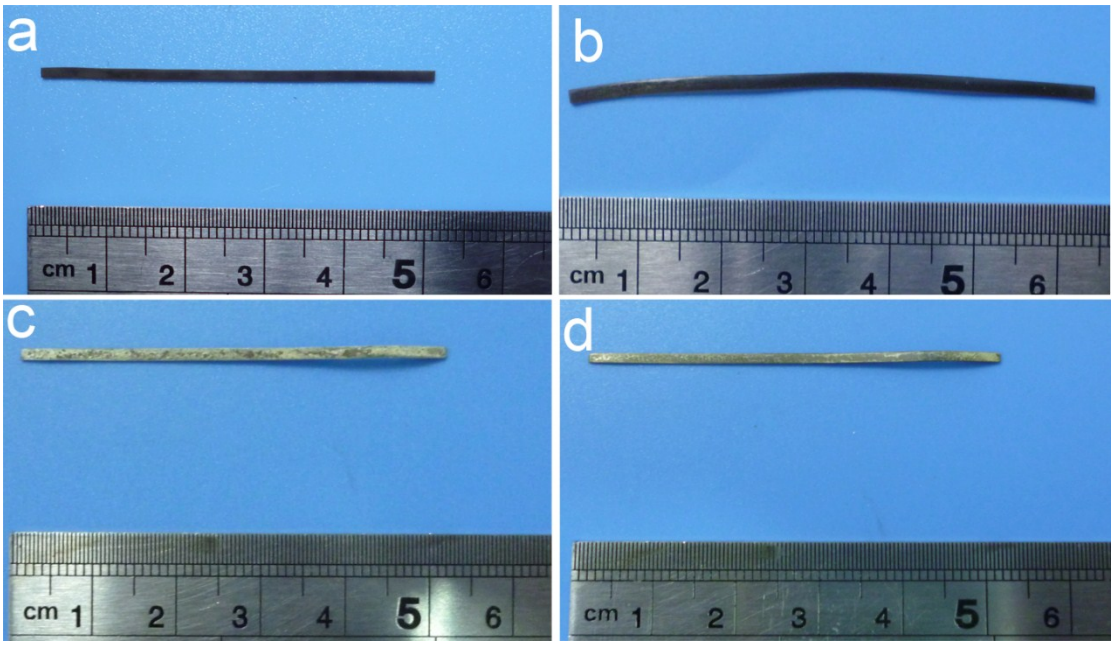

Fig. S3 (a, b) Digital photograph of 1wt% GE/TPU strip before (a) and after (b) swelling in toluene. (c, d) Digital photograph of 1 wt% graphene embedded GE/AgNPs/TPU strip before (c) and after (d) moving AgNPs on surface by a 3M tape.

Reference	Filler type	Matrix	Max strain(%)	Gauge factor
1	SWCNT	PDMS	280	0.82
2	Graphene woven fabric	PDMS	10	1000
3	CNT	PDMS	150	0.004
4	Pt-coated polymeric nanofibres	Ultraviolet-curable polyurethane acrylate	5	11.45
5	Graphene–polyvinylidene fluorid	PVDF	1.5	N/A
6	CNT Yarn	N/A	0.04	0.5
7	MWCNT forrest	Polyurethane	275	1.07
8	MWCNT	Polyurethane	403	4
9	Silver nanoparticles	SBS	16	19
10	CNT	PDMS	300	1
11	Functionalized MWNTs	TPU	200	140238
12	Graphene/Nanocellulose	PDMS	100	7.1
13	AgNWs	PDMS/ Ecoflex	50	1
14	Graphene woven fabrics	PDMS	6	1000
15	Reduced graphene oxide	PET	3	9.49
16	carbon black particles	Ecoflex	100	3.8
17	AgNWs	PDMS	70	14
18	graphene	Natural rubber	800	35
19	MWNTs	PDMS	120	9617
20	CNT fibers	Ecoflex	960	64
21	CNT	Ecoflex	500	2.4
22	Graphene woven fabrics	PDMS	200	35
23	CNT	Gum/PDMS	530	25
24	GaInSn	PDMS	60	2
25	GE/ nylon covered rubber	PDMS	150	1.4
26	Carbonized patterns	PDMS	100	20000
27	N/A	PU/PEDOT:PSS	160	1
28	RGO	Human hairs	30	4.46
29	Graphite	Paper	0.6	536.6
30	CNT	Natural rubber	100	43.5
This work	**GE/AgNPs**	**PU**	**1000**	**467.5**

Table S1 Selected parameters extracted from papers on composite strain sensors

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