

**Table S1.** Comparisons on conductivity between this work and the available conducting polymer-coated fabrics, carbon nanomaterial-coated fabrics and carbon nanomaterial/conducting polymer hybrid-coated fabrics.

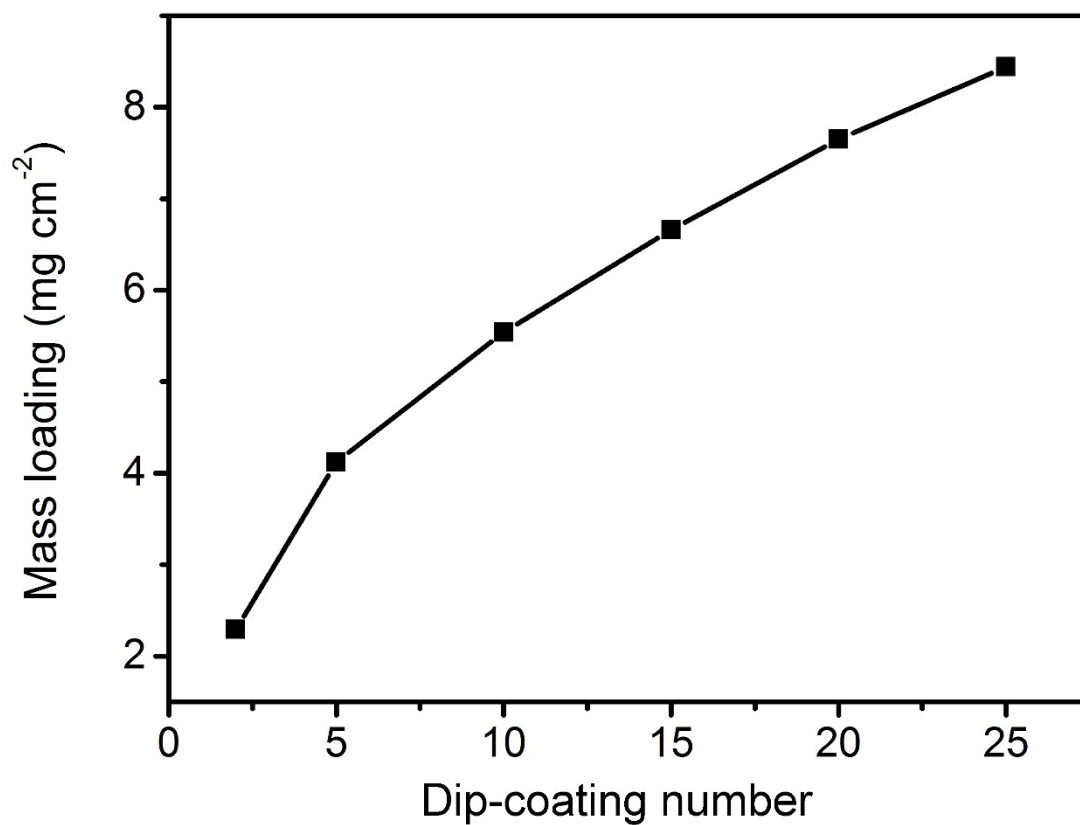
No.	Materials	Conductivity (S m <sup>-1</sup> )	Ref.
1	PPy-coated cotton fabric	2.25	[1]
2	PPy-coated linen fabric	1.5	[1]
3	PPy-coated viscose fabric	2.18	[1]
4	PPy-coated PET fabric	0.95	[1]
5	PPy-coated cotton fabric	615	[2]
6	PPy-coated cotton fabric	303	[3]
7	PPy-coated fabric	10	[4]
8	PPy-coated cotton fabric	580	[5]
9	PEDOT:PSS-coated fabric	171	[6]
10	PANI-coated PET fabric	0.685	[7]
11	CNT-coated cotton fabric	0.356	[8]
12	rGO-coated fabric	5.22	[9]
13	CNT-coated PET fabric	26.15	[7]
14	PANI/CNT-coated PET fabric	38.77	[7]
15	PPy/rGO-coated cotton fabric	120	[10]
16	PPy/GO-coated cotton fabric	22	[11]
17	PPy-coated cotton fabric	52.24	This work
18	CNT/rGO-coated cotton fabric	38.64	This work

PPy: polypyrrole; PEDOT:PSS: poly(3,4-ethylene-dioxythiophene):poly(styrene-4-sulfonate); PANI: polyaniline; CNT: carbon nanotube; rGO: reduced graphene oxide; PET: polyethylene terephthalate.

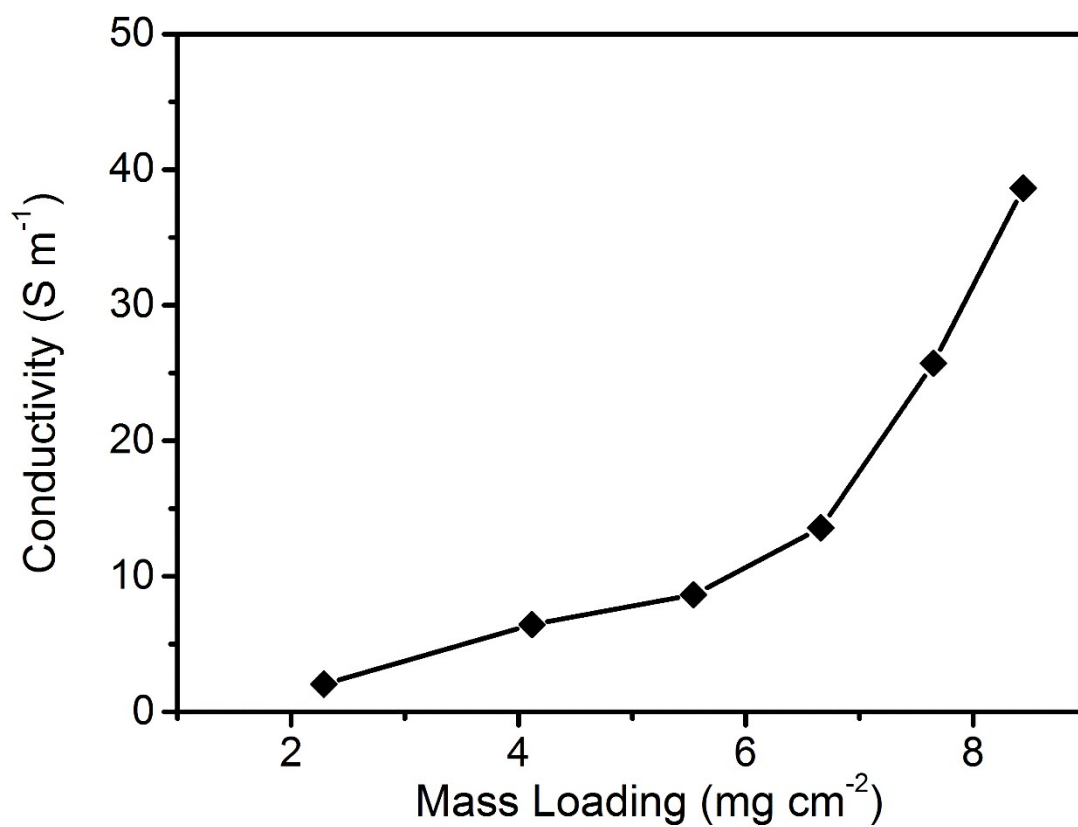
**Table S2.** Comparisons on the areal energy density between this work and the reported flexible supercapacitors (including asymmetric and symmetric supercapacitors).

No.	Materials	Areal energy density ( $\mu\text{Wh cm}^{-2}$ )	Ref.
1	Carbon/CNT	9.8	[12]
2	CNT	0.0306	[13]
3	VOPO <sub>4</sub> /graphene	1.7	[14]
4	CuCo <sub>2</sub> O <sub>4</sub> /MnO <sub>2</sub>	99	[15]
5	Mn <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> ·3H <sub>2</sub> O /graphene	0.17	[16]
6	Graphene/CNT	3.84	[17]
7	Graphene // MnO <sub>2</sub> /graphene/carbon	18.1	[18]
8	Al/Carbon/MnO <sub>2</sub>	35.2	[19]
9	Graphene/PANI	1.5	[20]
10	Carbon // NiCo <sub>2</sub> O <sub>4</sub> /carbon	9.46	[21]
11	MnO <sub>2</sub>	1.9	[22]
12	PEDOT:PSS // RuO <sub>2</sub> /PEDOT:PSS	0.053	[23]
13	PPy/carbon	52	[24]
14	PPy	7.5	[25]
15	Carbon // CoMoO <sub>4</sub> /Co(OH) <sub>2</sub>	167.5	[26]
16	AC // PANI	185	[27]
17	MnO <sub>2</sub> /CNT	35	[28]
18	CNT/rGO // PPy	260	This work

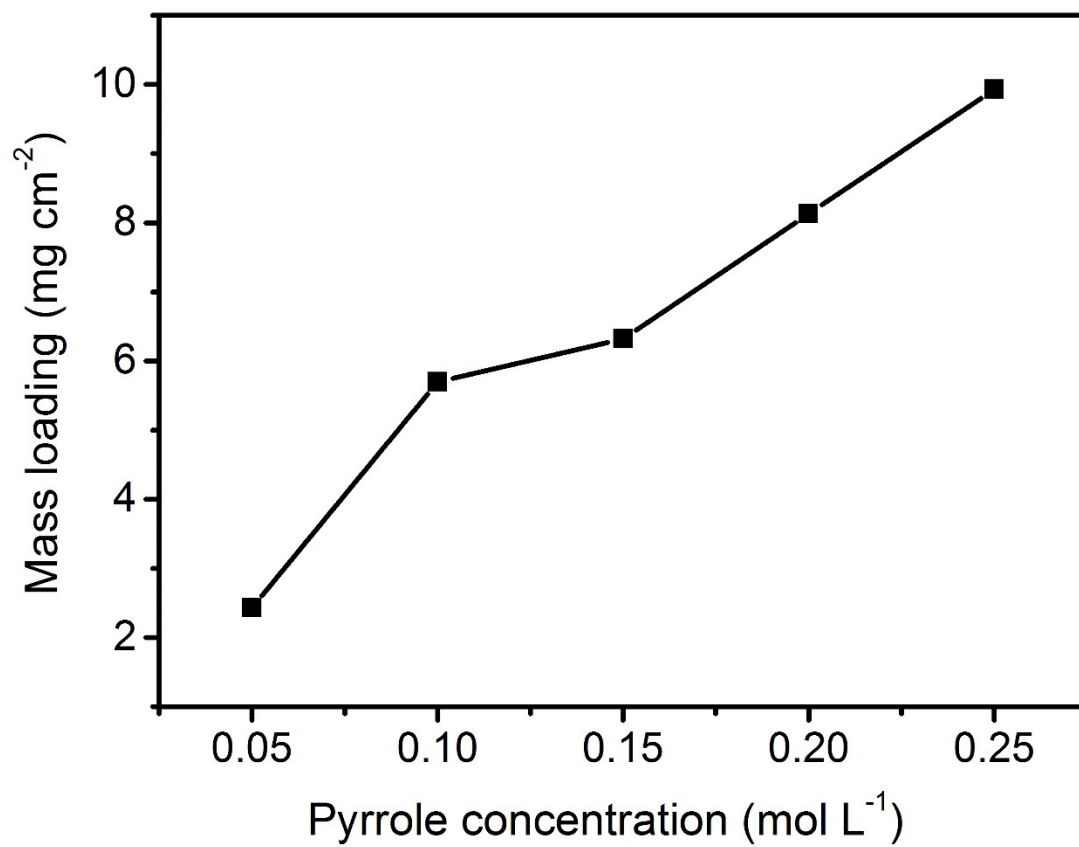
CNT: carbon nanotube; MnO<sub>2</sub>: manganese dioxide; VOPO<sub>4</sub>: vanadyl phosphate; Mn<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>·3H<sub>2</sub>O: manganese phosphate; PANI: polyaniline; PEDOT:PSS: poly(3,4-ethylene-dioxythiophene):poly(styrene-4-sulfonate); RuO<sub>2</sub>: ruthenium oxide; PPy: polypyrrole; CoMoO<sub>4</sub>: cobalt molybdate; Co(OH)<sub>2</sub>: cobalt hydroxide; AC: activated carbon; rGO: reduced graphene oxide.



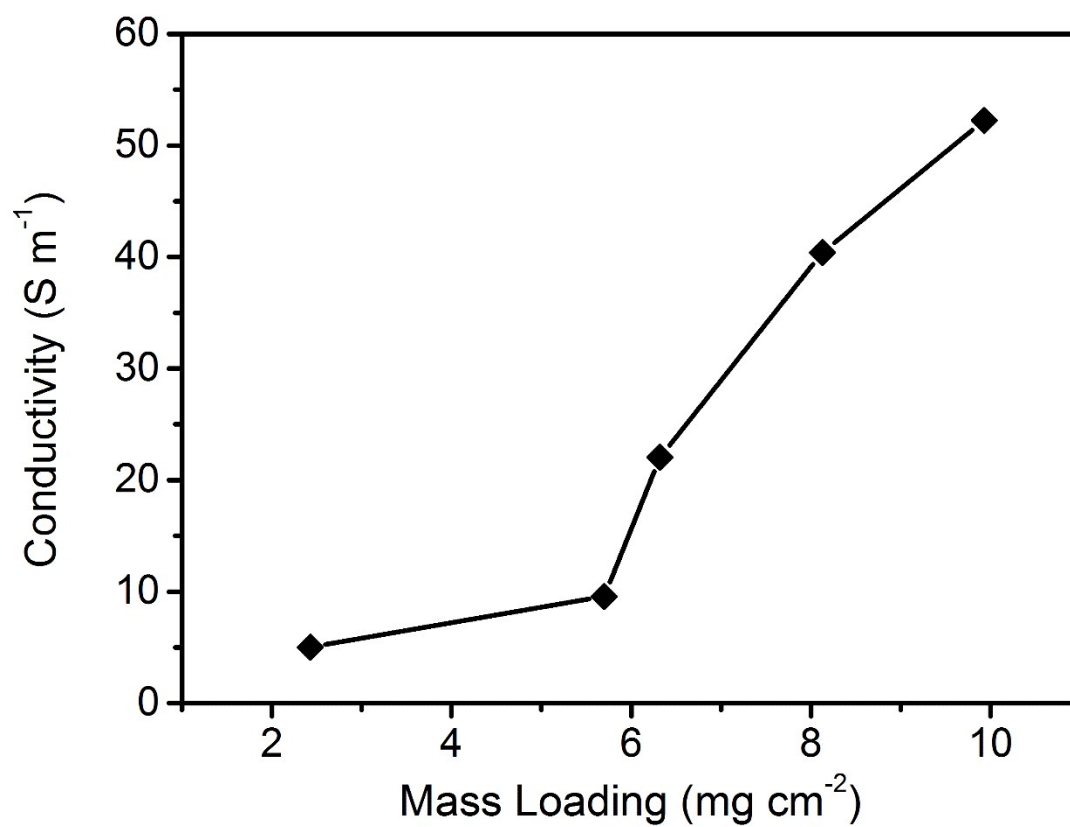
**Figure S1.** CNT/rGO-coated cotton fabric. Dependence of the mass loading of CNT/rGO on the dip-coating number.



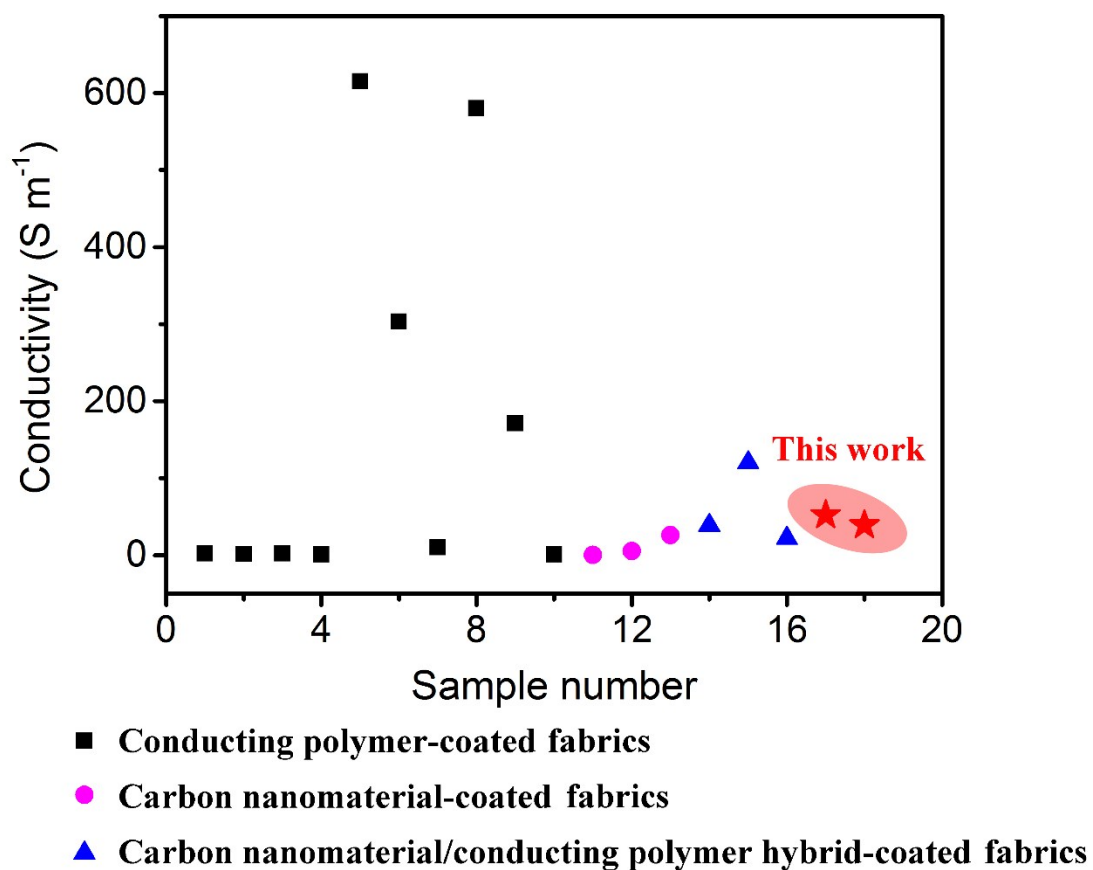
**Figure S2.** Dependence of the conductivity of CNT/rGO-coated cotton fabric on the mass loading of CNT/rGO.



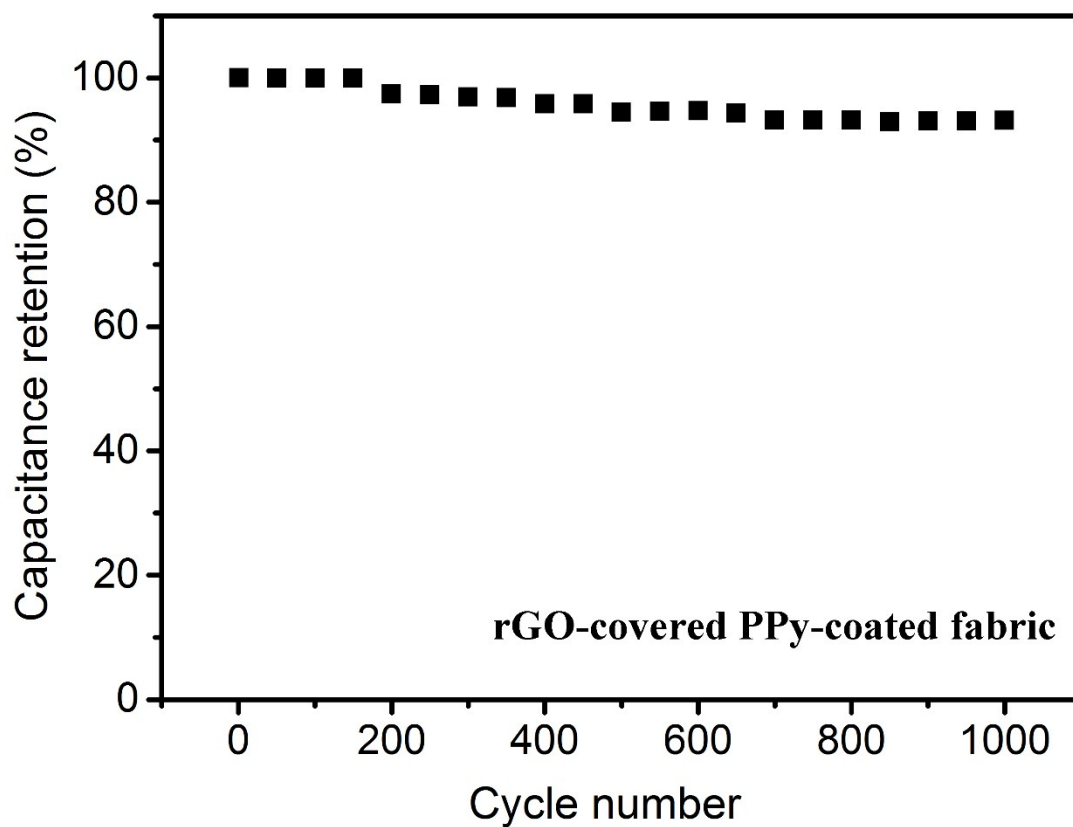
**Figure S3.** PPy-coated cotton fabric. Dependence of the mass loading of PPy on the pyrrole concentration.



**Figure S4.** Dependence of the conductivity of PPy-coated cotton fabric on the mass loading of PPy.



**Figure S5.** Comparisons on conductivity between this work and the available conducting polymer-coated fabrics, carbon nanomaterial-coated fabrics and carbon nanomaterial/conducting polymer hybrid-coated fabrics.



**Figure S6.** The long-life performance of rGO-covered PPy-coated cotton fabric. The current density is  $4 \text{ mA cm}^{-2}$ . The sample was prepared by coating an rGO layer on the PPy-coated cotton fabric.



## References for the Supporting Information

- 1 K. Firoz Babu, S. P. Siva Subramanian and M. Anbu Kulandainathan, *Carbohydr. Polym.*, 2013, **94**, 487-495.
- 2 J. Xu, D. Wang, L. Fan, Y. Yuan, W. Wei, R. Liu, S. Gu and W. Xu, *Org. Electron.*, 2015, **26**, 292-299.
- 3 L. Zhu, L. Wu, Y. Sun, M. Li, J. Xu, Z. Bai, G. Liang, L. Liu, D. Fang and W. Xu, *RSC Adv.*, 2014, **4**, 6261-6266.
- 4 Y. Egami, K. Suzuki, T. Tanaka, T. Yasuhara, E. Higuchi and H. Inoue, *Synth. Met.*, 2011, **161**, 219-224.
- 5 M. Lu, R. Xie, Z. Liu, Z. Zhao, H. Xu and Z. Mao, *J. Appl. Polym. Sci.*, 2016, **133**, 43601.
- 6 Y. Ding, M. A. Invernale and G. A. Sotzing, *ACS Appl. Mater. Interfaces*, 2010, **2**, 1588-1593.
- 7 F. C. R. Ramirez, P. Ramakrishnan, Z. P. Flores-Payag, S. Shanmugam and C. A. Binag, *Synth. Met.*, 2017, **230**, 65-72.
- 8 L. Li, T. Fan, R. Hu, Y. Liu and M. Lu, *Cellulose*, 2017, **24**, 1121-1128.
- 9 H. Zhang, J. Cao, W. Wu, Z. Cao and H. Ma, *Cellulose*, 2016, **23**, 3761-3770.
- 10 J. Xu, D. Wang, Y. Yuan, W. Wei, L. Duan, L. Wang, H. Bao and W. Xu, *Org. Electron.*, 2015, **24**, 153-159.
- 11 F. Yaghoubidoust, D. H. B. Wicaksono, S. Chandren and H. Nur, *J. Mol. Struct.*, 2014, **1075**, 486-493.
- 12 V. T. Le, H. Kim, A. Ghosh, J. Kim, J. Chang, Q. A. Vu, D. T. Pham, J. H. Lee, S. W. Kim and Y. H. Lee, *ACS Nano*, 2013, **7**, 5940-5947.
- 13 C. S. Lee and J. Bae, *J. Korean Phys. Soc.*, 2013, **63**, 2190-2193.
- 14 C. Wu, X. Lu, L. Peng, K. Xu, X. Peng, J. Huang, G. Yu and Y. Xie, *Nat. Commun.*, 2013, **4**, 2431.
- 15 Q. Wang, J. Xu, X. Wang, B. Liu, X. Hou, G. Yu, P. Wang, D. Chen and G. Shen, *ChemElectroChem*, 2014, **1**, 559-564.
- 16 C. Yang, L. Dong, Z. Chen and H. Lu, *J. Phys. Chem. C*, 2014, **118**, 18884-18891.
- 17 L. Kou, T. Huang, B. Zheng, Y. Han, X. Zhao, K. Gopalsamy, H. Sun and C. Gao, *Nat. Commun.*, 2014, **5**, 3754.
- 18 Z. Zhang, F. Xiao and S. Wang, *J. Mater. Chem. A*, 2015, **3**, 11215-11223.
- 19 S. He, R. Zhang, C. Zhang, M. Liu, X. Gao, J. Ju, L. Li and W. Chen, *J. Power Sources*, 2015, **299**, 408-416.
- 20 X. B. Zang, X. Li, M. Zhu, X. M. Li, Z. Zhen, Y. J. He, K. L. Wang, J. Q. Wei, F. Y. Kang and H. W. Zhu, *Nanoscale*, 2015, **7**, 7318-7322.
- 21 S. T. Senthilkumar, N. Fu, Y. Liu, Y. Wang, L. Zhou and H. Huang, *Electrochim. Acta*, 2016, **211**, 411-419.

- 22 X. Long, Z. Zeng, E. Guo, X. Shi, H. Zhou and X. Wang, *J. Power Sources*, 2016, **325**, 264-272.
- 23 C. Zhang, T. M. Higgins, S.-H. Park, S. E. O'Brien, D. Long, J. N. Coleman and V. Nicolosi, *Nano Energy*, 2016, **28**, 495-505.
- 24 J. Cherusseri and K. K. Kar, *RSC Adv.*, 2016, **6**, 60454-60466.
- 25 C. Wei, Q. Xu, Z. Chen, W. Rao, L. Fan, Y. Yuan, Z. Bai and J. Xu, *Carbohydr. Polym.*, 2017, **169**, 50-57.
- 26 G. K. Veerasubramani, A. Chandrasekhar, S. M. S. P, Y. S. Mok and S. J. Kim, *J. Mater. Chem. A*, 2017, **5**, 11100-11113.
- 27 H. Heydari and M. B. Gholivand, *New J. Chem.*, 2017, **41**, 237-244.
- 28 W. Qi, X. Li, Y. Wu, H. Zeng, C. Kuang, S. Zhou, S. Huang and Z. Yang, *Surf. Coat. Technol.*, 2017, **320**, 624-629.