

## References

1. Madakbas S, Cakmakci E, Kahraman M V, Esmer K. Preparation, characterisation, and dielectric properties of polypyrrole-clay composites. *Chemical Papers* 2013; 67, 1048-1053.
2. Yuanjun Liu, Xiaoming Zhao, Xiao Tuo. Study of graphite/silicon carbide coating of plain woven fabric for electrical megawatt absorbing properties. *The Journal of The Textile Institute* 2017; 108,4: 483-488.
3. Upadhyay J, Kumar A. Investigation of structural, thermal and dielectric properties of polypyrrole nanotubes tailoring with silver nanoparticles. *Composites Science and Technology* 2014; 97, 55-62.
4. Yuanjun Liu, Xiaoming Zhao. The influence of dopant type and dosage on the dielectric properties of polyaniline/nylon composites. *The Journal of The Textile Institute* 2017; 108, 9: 1628-1633.
5. Yuanjun Liu, Yuanchen Liu, Xiaoming Zhao. The research of EM wave absorbing properties of ferrite/silicon carbide double coated polyester woven fabric. *The Journal of The Textile Institute* 2018; 109, 1: 106-112.
6. Yuanjun Liu, Baocheng Liu, Xiaoming Zhao. The influence of the type and concentration of oxidants on the dielectric constant of the polypyrrole-coated plain woven cotton fabric, *The Journal of The Textile Institute* 2018; 109, 9: 1127-1132.
7. Wu F, Xie A, Sun M X, Wang Y, Wang M Y. (). Reduced graphene oxide (RGO) modified spongelike polypyrrole (PPy) aerogel for excellent electromagnetic absorption. *Journal of Materials Chemistry A* 2015; 3: 14358-14369.
8. Zhai J, Li Y, Hu S, Xiao D, Han H, Jiang Y, Qu Y. Effect of oxidant dosage and solvent ratio on electric properties of polypyrrole. *Materials Technology* 2015; 30: 90-95.
9. Wang H C, Ma N, Yan Z R, Deng L, He J, Hou Y L, Jiang Y, Yu G H. Cobalt/polypyrrole nanocomposites with controllable electromagnetic properties. *Nanoscale* 2015; 7: 7189-7196.
10. Yuanjun Liu, Xiaoming Zhao, Xiao Tuo. Preparation of polypyrrole coated cotton conductive fabrics. *The Journal of The Textile Institute* 2017; 108, 5: 829-834.
11. Yuanjun Liu, Yuanchen Liu, Xiaoming Zhao. The influence of pyrrole concentration on the dielectric properties of polypyrrole composite material. *The Journal of The Textile Institute* 2017; 108,7: 1246-1249.
12. Yuanjun Liu, Yuanchen Liu, Xiaoming Zhao. The influence of dopant on the dielectric properties of flexible polypyrrole composites. *The Journal of The Textile Institute* 2017; 108, 7: 1280-1284.
13. Elahi A, Niaz N A, Awan M S, Shakoar A, Mahmood K, Khan Y. Structural, electrical, and magnetic properties of polypyrrole-Zn<sub>0.5</sub>Ni<sub>0.45</sub>Mn<sub>0.05</sub>Fe<sub>2</sub>O<sub>4</sub> nanocomposites prepared by in situ chemical polymerization. *Polymer Science Series B* 2015; 57: 738-749.
14. Xie A, Jiang W C, Wu F, Dai X Q, Sun M X, Wang Y, Wang M Y. Interfacial synthesis of polypyrrole microparticles for effective dissipation of electromagnetic waves. *Journal of Applied Physics* 2015; 118.
15. Sui M X, Lu X L, Xie A, Xu W D, Rong X H, Wu G J. The synthesis of three-dimensional (3D) polydopamine-functioned carbonyl iron powder @ polypyrrole (CIP@PPy) aerogel composites for excellent microwave absorption. *Synthetic Metals* 2015; 210: 156-164.
16. Wu F, Sun M X, Jiang W C, Zhang K, Xie A, Wang Y, Wang M Y. A self-assembly method for the fabrication of a three-dimensional (3D) polypyrrole (PPy)/ poly(3,4-ethylenedioxythiophene) (PEDOT) hybrid composite with excellent absorption

- performance against electromagnetic pollution. *Journal of Materials Chemistry C* 2016; 4: 82-88.
17. Ahmed K, Kanwal F, Ramay S M, Mahmood A, Atiq S, Al-Zaghayer Y S. High dielectric constant study of TiO<sub>2</sub>-Polypyrrole composites with low contents of filler prepared by in situ polymerization. *Advances in Condensed Matter Physics*, 2016.
  18. Yang R B, Reddy P M, Chang C J, Chen P A, Chen J K, Chang C C. Synthesis and characterization of Fe<sub>3</sub>O<sub>4</sub>/polypyrrole/carbon nanotube composites with tunable microwave absorption properties: Role of carbon nanotube and polypyrrole content. *Chemical Engineering Journal* 2016; 285: 497-507.
  19. Bhat N V, Seshadri D T, Nate M M, Gore A V. Development of conductive cotton fabrics for heating devices. *Journal of Applied Polymer Science* 2006; 102: 4690-4695.
  20. Hakansson E, Kaynak A, Lin T, Nahavandi S, Jones T, Hu E. Characterization of conducting polymer coated synthetic fabrics for heat generation. *Synthetic Metals* 2004; 144: 21-28.
  21. Liu Y J, Zhao X M, Tuo X. The research of EM wave absorbing properties of ferrite/silicon carbide/graphite three-layer composite coating knitted fabrics. *The Journal of the Textile Institute* 2016; 107: 483-492.
  22. Liu Y, Zhao X. Experimental Studies on the Dielectric Behaviour of Polyester Woven Fabrics. *FIBRES & TEXTILES in Eastern Europe* 2016; 24, 3(117): 67-71. DOI: 10.5604/12303666.1196614.
  23. Kim S H, Oh K W, Bahk J H. Electrochemically synthesized polypyrrole and Cu-plated nylon/spandex for electrotherapeutic pad electrode. *Journal of Applied Polymer Science* 2004; 91: 4064-4071.
  24. Kincal D, Kumar A, Child A, Reynolds J. Conductivity switching in polypyrrole-coated textile fabrics as gas sensors. *Synthetic Metals* 1998; 92: 53-56.
  25. Lekpittaya P, Yanumet N, Grady B P, O'Rear E A. Resistivity of conductive polymer-coated fabric. *Journal of Applied Polymer Science* 2004; 92: 2629-2636.
  26. Maity S, Chatterjee A, Singh B, Singh A P. Polypyrrole based electro-conductive textiles for heat generation. *Journal of The Textile Institute* 2014; 105: 887-893.
  27. Oh K W, Park H J, Kim S H. Stretchable conductive fabric for electrotherapy. *Journal of Applied Polymer Science* 2003; 88: 1225-1229.
  28. Varesano A, Vineis C, Tonetti C, Mazzuchetti G, Bobba V. Antibacterial property on Gram-positive bacteria of polypyrrole-coated fabrics. *Journal of Applied Polymer Science* 2015; 132: 698-701.
  29. Wang J, Kaynak A, Wang L, Liu X. Thermal conductivity studies on wool fabrics with conductive coatings. *Journal of The Textile Institute* 2006; 97: 265-269.
  30. Xu J, Wang D X, Yuan Y, Wei W, Gu S J, Liu R N, Wang X J, Liu L, Xu W L. Polypyrrole-coated cotton fabrics for flexible supercapacitor electrodes prepared using CuO nanoparticles as template. *Cellulose* 2015; 22: 1355-1363.
  31. Yaghoubidoust F, Wicaksono D H B, Chandren S, Nur H. Effect of graphene oxide on the structural and electrochemical behavior of polypyrrole deposited on cotton fabric. *Journal of Molecular Structure* 2014; 1075: 486-493.