

References

1. Bar-Cohen Y, Ed., *Electroactive Polymer (EAP) Actuators as Artificial Muscles – Reality, Potential and Challenges*, 2nd ed., SPIE Press, 2004.
2. Calvert P. In *Biomedical Applications of Electroactive Polymers*, 1st ed., Capri F, Smela E, Eds., John Wiley & Sons, 2009, pp. 7-42.
3. Umemoto S, Matsumura T, and Sakai T. Elongation/contraction properties for poly(acrylonitrile) gel fibers stimulated by pH. *Polym. Gels. Netw.* 1993, 1 (2): 115–126.
4. Schreyer HB, Gebhart N, Kim KJ, and Shahinpoor M. Electrical activation of artificial muscles containing polyacrylonitrile gel fibers. *Biomacromolecules* 2000, 1: 642–647.
5. Hou H et al. Electrospun Polyacrylonitrile Nanofibers Containing a High Concentration of Well-Aligned Multiwall Carbon Nanotubes, *Chem Mater* 2005, 17: 967-973.
6. Gonzalez M, Walter W. An investigation of electrochemomechanical actuation of conductive Polyacrylonitrile (PAN) nanofiber composites, *Proc SPIE* 2014, 9056.
7. Liu X et al. Tough Nanocomposite Ionogel-based Actuator Exhibits Robust Performance, *Nature Scientific Reports* 2014 4: 6673.
8. Okoniewski M, Koprowska J, Sojka-Ledakowicz J, Rakowski W, Zyzka D. *Sposób nadawania trwałych własności antyelektrostatycznych wyrobom włókienniczym z włóknotwórczych polimerów syntetycznych*, patent PL 110244, Polska, 1977.
9. Michalak M, Krucinska I, Surma B. Textronic Textile Product. *Fibres Text East Eur* 2006, 14 (5): 54-59.
10. Aniolczyk H, Koprowska J, Mamrot P, Lichawska J. Application of Electrically Conductive Textiles as Electromagnetic Shields in Physiotherapy *Fibres. Text East Eur* 2004, 12: 47-50.
11. PubChem Compound database of National Center for Biotechnology Information,

<http://pubchem.ncbi.nlm.nih.gov>, hyperlink valid on 5.09.2015.

12. Dunn JG, Muzenda C. Thermal oxidation of covellite (CuS). *Thermochim Acta* 2001, 369: 117-123.
13. Simonescu CM, Teodorescu VS, Carp O, Patron L, Capatina C. Thermal behaviour of CuS (covellite) obtained from copper–thiosulfate system. *J Therm Anal Calorim* 2007, 88 (1): 71-76.
14. Quintana-Ramirez PV, Arenas-Arrocena MC, Santos-Cruz J, Vega-González M, Martínez-Alvarez O, Castaño-Meneses VM, Acosta-Torres LS, de la Fuente-Hernández J. Growth evolution and phase transition from chalcocite to digenite in nanocrystalline copper sulfide: Morphological, optical and electrical properties. *Beilstein J Nanotechnol* 2014, 5: 1542–1552.
15. Hiroshi Nozaki, Kenji Shibata, Naoki Ohhashi, Metallic hole conduction in CuS, *J. Solid State Chem* 1991, 91(2): 306–311.
16. Warner TE, *Synthesis, Properties and Mineralogy of Important Inorganic Materials*, John Wiley & Sons, 2012.
17. Kyoung ChK, Kim KJ, Kim D, Manford Ch, Heo S, Shahinpoor M. Performance Characteristics of Electro–chemically Driven Polyacrylonitrile Fiber Bundle Actuators. *J Intel Mat Syst Str* 2006, 17: 563-576.
18. Okoniewski M et al. *Conductive fibers*, patent 5593618 A, USA, 1997.