References

- 1. Pietrelli L, Palombo M, Taresco V, Crisante F, Francolini I and Piozzi A. Copper (II) adsorption capacity of a novel hydroxytyrosol-based polyacrylate. *Polymer Bulletin* 2017; 74: 1175-1191.
- 2. Abdolali A, Ngo HH, Guo W, et al. A breakthrough biosorbent in removing heavy metals: Equilibrium, kinetic, thermodynamic and mechanism analyses in a lab-scale study. *Science of the Total Environment* 2016; 542: 603-611.
- 3. Ghosh A, Collie SR. Keratinous materials as novel absorbent systems for toxic pollutants. *Defence Science Journal* 2014; 64: 209-221.
- 4. Aluigi A, Vineis C, Varesano A, Mazzuchetti G, Ferrero F and Tonin C. Structure and properties of keratin/PEO blend nanofibers. *European Polymer Journal* 2008; 44: 2465-2475.
- 5. Huson M, Evans D, Church J, Hutchinson S, Maxwell J and Corino G. New insight into the nature of the wool fibre surface. *Journal of Structural Biology* 2008; 163: 127-136.
- 6. Li R, and Wang D. Preparation of regenerated wool keratin films from wool keratinionic liquid solutions. *Journal of Applied Polymer Science* 2013, 127, 2648-2653.
- 7. Shahidi S, and Wiener J. Radiation effects in textile materials. In *Radiation Effects in Materials* (ed. Monteiro, W. A.) Rijeka: INTECH; 2016, pp. 309-328.
- 8. Hurren CJ. *A study into the ultrasonic cleaning of wool*. Thesis. Burwood, Australia, Deakin University; 2010.
- 9. Kamel MM, El Zawahry MM, Ahmed NSE. Abdelghaffar F. Ultrasonic dyeing of cationized cotton fabric with natural dye. Part 1: Cationization of cotton using Solfix E. *Ultrasonics Sonochemistry* 2009; 16: 243-249.
- 10. Kadam VV, Goud V, Shakyawar DB. Ultrasound scouring of wool and its effects on fibre quality. *Indian Journal of Fibre & Textile Research* 2013; 38: 410-414.
- Peila R, Grande GA, Giansetti M, Rehman S, Sicardi S. and Rovero G. Washing off intensification of cotton and wool fabrics by ultrasounds. *Ultrasonics Sonochemistry* 2015; 23: 324-332.
- 12. Li Q, Hurren CJ, Yu H, Ding C. and Wang X. Thermal and mechanical properties of ultrasonically treated wool. *Textile Research Journal* 2011; 82: 195-202.
- 13. Li Q, Hurren CJ, Wang X. Changes in wool protein structure and fabric properties with ultrasonic treatment. *Smartex Research Journal* 2012; 1: 48-55.
- 14. Li Q, Hurren CJ, Ding C, Wang L, Lin T, and Wang X. Ultrasonic scouring of wool and its effects on fibre breakage during carding. *Journal of The Textile Institute* 2011; 102: 1059-1064.
- 15. Bahtiyari Ml. and Duran K. A study on the usability of ultrasound in scouring of raw wool. *Journal of Cleaner Production* 2013; 41: 283-290.
- 16. Czaplicki Z, and Ruszkowski K. Optimization of Scouring Alpaca Wool by Ultrasonic Technique. *Journal of Natural Fibers* 2014; 11: 169-183.
- 17. Kunik A, Semeshko O, Asaulyuk T, Saribyekova Y, and Myasnikov S. Development of a two-step technology of scouring wool by the method of high-energy discrete treatment. *Eastern-European Journal of Enterprise Technologies* 2016; 4: 36-43.
- 18. Hanzlíková Z, Braniša J, Hybler P, Šprinclová I, Jomová K, and Porubská M. Sorption properties of sheep wool irradiated by accelerated electron beam. *Chemical Papers* 2016; 70: 1299–1308.
- 19. Hanzlíková Z, Braniša J, Jomová K, Fülöp M, Hybler P, Porubská, M. Electron beam irradiated sheep wool Prospective sorbent for heavy metals in wastewater. *Separation and Purification Technology* 2018; 193: 345-350.
- 20. Eckschlager K. Chyby chemických rozboru (Errors in chemical analyses, in Czech), Prague: SNTL; 1971, pp. 17-35.

- 21. Hanzlíková Z, Hybler P, Fülöp M, et al. Irradiated lanoline as a prospective substance for biomedical applications: A spectroscopic and thermal study. *Radiation Physics and Chemistry* 2015; 113: 41-46.
- 22. Porubská M, Hanzlíková Z, Braniša J, et al. The effect of electron beam on sheep wool. *Polymer Degradation and Stability* 2015; 111: 151-158.
- 23. Kar P. and Misra M. Use of keratin fiber for separation of heavy metals from water. *Journal of Chemical Technology and Biotechnology* 2004; 79: 1313-1319.
- 24. Wang F, Lu X, and Li X. Selective removals of heavy metals (Pb 2+, Cu 2+, and Cd 2+) from wastewater by gelatination with alginate for effective metal recovery. *Journal of Hazardous Materials* 2016; 308: 75-83.
- 25. Eser A, Triton VN, Aydemir T, Becerik S. and Dinçer A. Removal of nickel(II) ions by histidine modified chitosan beads. *Chemical Engineering Journal* 2012; 210: 590-596.
- 26. Genç-Fuhrman H., Mikkelsen PS, and Ledin A. Simultaneous removal of As, Cd, Cr, Ni and Zn from stormwater using high-efficiency industrial sorbents: Effect of pH, contact time and humic acid. *Science of Total Environment* 2016; 566-567: 76-85.