

References

1. Padaki N V, Das B, Basu A. *Advances in Silk Science and Technology*, Chapter 1 - Advances in understanding the properties of silk, in Adv. Silk Sci. Technol., (Ed.: A. Basu), Woodhead Publishing, Cambridge, 2015, Ch. 1, p. 3.
2. Altman G H, Diaz F, Jakuba C, Calabro T, Horan R L, Chen J, Lu H, Richmond J, Kaplan D L. Silk-based biomaterials. *Biomaterials* 2003; 24: 401-416.
3. Vepari C, Kaplan D L. Silk as a biomaterial. *Prog. Polym. Sci.* 2007; 32: 991-1007.
4. Pereira R F P, Silva M M, de Zea Bermudez V. Bombyx mori Silk Fibers: An Outstanding Family of Materials. *Macromol. Mater. Eng.* 2015; 300: 1171-1198.
5. Zhao W, Jin X, Cong Y, Liu Y, Fu J. Degradable natural polymer hydrogels for articular cartilage tissue engineering. *J. Chem. Technol. Biotechnol.* 2013; 88: 327-339.
6. Zhang Y Q, Tao M L, De Shen W, Mao J P, Chen Y H. Synthesis of silk sericin peptides–Lasparaginase bioconjugates and their characterization. *J. Chem. Technol. Biotechnol.* 2006; 81: 136-145.
7. Silva N H C S, Vilela C, Marrucho I M, Freire C S R, Pascoal Neto C, Silvestre A J D. Protein-based materials: from sources to innovative sustainable materials for biomedical Applications. *J. Mater. Chem. B* 2014; 2: 3715-3740.
8. Abdel-Naby W, Lawrence B D. *Processing of silk biomaterials*. in Adv. Silk Sci. Technol., (Ed.: A. Basu), Woodhead Publishing, Cambridge 2015, Ch. 9, p.171.
9. Hardy J G, Römer L M, Scheibel T R. Polymeric materials based on silk proteins. *Polymer (Guildf)*. 2008; 49: 4309-4327.
10. Teimouri A, Ebrahimi R, Emadi R, Beni B H, Chermahini A N. Nano-composite of silk fibroin–chitosan/Nano ZrO₂ for tissue engineering applications: Fabrication and morphology. *Int. J. Biol. Macromol.* 2015; 76: 292-302.
11. Samal S K, Kaplan D L, Chiellini E. Ultrasound sonification effects on silk fibroin protein. *Macromol. Mater. Eng.* 2013; 298: 1201-1208.
12. Srisuwan Y, Srihanam P, Baimark Y. Preparation of silk fibroin microspheres and its application to protein adsorption. *J. Macromol. Sci., Part A: Pure and Appl. Chem.* 2009; 46: 521–525.
13. Yetiskin B, Okay O. High-strength silk fibroin scaffolds with anisotropic mechanical properties. *Polymer* 2017; 112: 61-70.
14. Bie S, Ming J, Zhou Y, Zhong T, Zhang F, Zuo B. Rapid formation of flexible silk fibroin gel-like films. *J. Appl. Polym. Sci.* 2015; 132: 41842.
15. Silva M F, De Moraes M A, Nogueira G M, Rodas A C D, Higa O Z, Beppu M M. Glycerin and ethanol as additives on silk fibroin films: Insoluble and malleable films. *J. Appl. Polym. Sci.* 2013;128: 115-122.
16. Zuo L, Zhang F, Gao B, Zuo B. Fabrication of Electrical Conductivity and Reinforced Electrospun Silk Nanofibers with MWNTs. *FIBRES & TEXTILES in Eastern Europe* 2017; 25, 3(123): 40-44. DOI: 10.5604/01.3001.0010.1687.
17. Liang C X, Hirabayashi K. Improvements of the physical properties of fibroin membranes with sodium alginate. *J. Appl. Polym. Sci.* 1992; 45: 1937-1943.
18. Ha S W, Park Y H, Hudson S M. Dissolution of Bombyx mori silk fibroin in the calcium nitrate tetrahydrate-methanol system and aspects of wet spinning of fibroin solution. *Biomacromolecules*, 2003; 4: 488-496.
19. Kawahara Y, Furukawa K, Yamamoto T. Self - Expansion Behavior of Silk Fibroin Film. *Macromol. Mater. Eng.* 2006; 291: 458-462.
20. Ajisawa A. Dissolution of silk fibroin with calciumchloride/ethanol aqueous solution. *J.Seric. Sci. Jpn* 1998; 67: 91-94.

21. Mathur A B, Tonelli A, Rathke T, Hudson S. The dissolution and characterisation of Bombyx Mori Silk Fibroin in Calcium Nitrate-Methanol Solution and the Regeneration of Films. *Biopolymers* 1997; 42: 61-74.
22. Matsumoto A, Lindsay A, Abedian B, Kaplan D L. Silk Fibroin Solution Properties Related to Assembly and Structure. *Macromol. Biosci.* 2008; 8: 1006-1018.
23. Liu Y, Liu H, Qian J, Deng J, Yu T. Immobilization of Glucose Oxidase in the Regenerated Silk Fibroin Membrane: Characterization of the Membrane Structure and Its Application to an Amperometric Glucose Sensor Employing Ferrocene as Electron Shuttle. *J. Chem. Technol. Biotechnol.* 1995; 64: 269-276.
24. Zuo B, Liu L, Wu Z. Effect on properties of regenerated silk fibroin fiber coagulated with aqueous methanol/ethanol. *J. Appl. Polym. Sci.* 2007; 106: 53-59.
25. Sun Y, Shao Z, Ma M, Hu P, Liu Y, Yu T. Acrylic Polymer - Silk Fibroin Blend Fibres. *J. Appl. Polym. Sci.* 1997; 65:959-966.
26. Strobin G, Wawro D, Stęplewski W, Ciechańska D, Jóźwicka J, Sobczak S, Haga A. Formation of Cellulose/Silk-Fibroin Blended Fibres. *FIBRES & TEXTILES in Eastern Europe* 2006; 14, 4 (58): 32–35.
27. Strobin G, Ciechańska D, Wawro D, Stęplewski W, Jóźwicka J, Sobczak S, Haga A. Chitosan Fibres Modified by Fibroin. *FIBRES & TEXTILES in Eastern Europe* 2007; 15, 5-6(64-65): 146–148.
28. Wang Q, Chen Q, Yang Y, Shao Z. Effect of Various Dissolution Systems on the Molecular Weight of Regenerated Silk Fibroin. *Biomacromolecules* 2013; 14: 285-289.
29. Kuzmina OG, Sashina ES, Novoselov NP, Zaborski M. Blends of Cellulose and Silk Fibroin in 1-butyl-3-methylimidazolium chloride Based Solutions. *FIBRES & TEXTILES in Eastern Europe* 2009; 17, 6(77): 36–39.
30. Kaplan D L, Mello C M, Arcidiacono S, Fossey S, Senecal K, Muller W. in *Protein-Based Mater.*, (Eds.: K. McGrath, David. Kaplan), Birkhauser Boston, Boston, USA 1997, Ch. 4, p. 114.
31. Ngo H T, Bechtold T. Sorption behaviour of reactive dyed labelled fibroin on fibrous substrates. *J. Appl. Polym. Sci.* 2016; 133(35): DOI: 10.1002/APP 43880.
32. Ngo H T, Bechtold T. Surface modification of textile material through deposition of regenerated silk fibroin. *J. Appl. Polym. Sci.* 2017; DOI: 10.1002/app.45098.
33. Arthur R J M, Martell E. *Determination and Use of Stability Constants*. VCH Publishers, New York/ Weinheim 1992.
34. Wang F, Cao T T, Zhang Y Q. Effect of silk protein surfactant on silk degumming and its properties. *Mater. Sci. Eng. C* 2015; 55: 131-136.
35. Reumann R D., *Pruefverfahren in der Textil- und Bekleidungsindustrie*, Springer, Berlin, Germany 2000.
36. Bradford M M. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. *Anal. Biochem.* 1976; 72: 248-254.
37. Dubey P, Murab S, Karmakar S, Chowdhury P K, Ghosh S. Modulation of self-assembly process of fibroin: an insight for regulating the conformation of silk biomaterials. *Biomacromolecules* 2015; 16(12): 3936–3944.
38. Lu Q, Zhang B, Li M, Zuo B, Kaplan D L, Huang Y, Zhu H. Degradation mechanism and control of silk fibroin. *Biomacromolecules* 2011; 12: 1080–1086.
39. Hu X, Kaplan D, Cebe P. Determining Beta-Sheet Crystallinity in Fibrous Proteins by Thermal Analysis and Infrared Spectroscopy. *Macromolecules* 2006; 39(18): 6161–6170.
40. Zhang C, Song D, Lu Q, Hu X, Kaplan D L, Zhu H. Flexibility Regeneration of Silk Fibroin in Vitro. *Biomacromolecules* 2012; 13(7): 2148–2153.
41. Rath H. *Lehrbuch Der Textilchemie*, Springer-Verlag Berlin Heidelberg, 1972.

42. Vickery H B, Block R J. The basic amino acids of silk fibroin. The determination of basic amino acids yielded by proteins, *J. Biol. Chem.* 1931; 93: 105-112.
43. Corfield M C, Howitt F O, Robson A. Basic Amino-acids of Silk Fibroin, *Nature* 1954; 174: 603-604.
44. Wang H-Y, Zhang Y-Q. Effect of regeneration of liquid silk fibroin on its structure and characterization. *Soft Matter* 2013; 9:138-145.
45. Tanaka K, Inoue S, Mizuno S. Hydrophobic interaction of P25, containing Asn-linked oligosaccharide chains, with the HL complex of silk fibroin produced by *Bombyx mori*. *Insect Biochem. Mol. Biol.* 1999; 29: 269-276.
46. Kundu B, Rajkhowa R, Kundu S C, Wang X. Silk fibroin biomaterials for tissue regenerations. *Adv. Drug Deliv. Rev.* 2013; 65: 457-470.
47. Whewell C S. *Fibres, Animal, Silk.* Vol 5., J. F. Thorpe, M. A. Whiteley, in Thorpe's Dict. Appl. Chem., 4th Edition, New York 1941, p. 87.
48. "Calcium carbonate (precipitated),"
<http://webbook.nist.gov/cgi/cbook.cgi?ID=C471341&Mask=80>
49. Rey F, Antelo J M, Arc F, Penedo F J. Equilibrium Constants of Metal Amino Acid Complexes. *Polyhedron* 1990; 9/5: 665468.
50. Fox S, Bulsching I, Barklage W, Strasdeit H. Coordination of Biologically Important r-Amino Acids to Calcium(II) at High pH: Insights from Crystal Structures of Calcium α -Aminocarboxylates. *Inorg. Chem.* 2007; 46: 818-824.
51. <https://www.britannica.com/science/coordination-compound/Ligands-and-chelates>, accessed 2016.07.03.