

Investigation of ageing phenomena of hydrophilic coatings on Poly (ether ether ketone) (PEEK)

김경학, 박범준^{1,†}

경희대학교; ¹경희대학교 화학공학과

(bjpark@khu.ac.kr[†])

Polyether ether ketone (PEEK) is a high performance engineering plastic with great bio-compatibility, chemical resistance, and excellent mechanical strength. Owing to these features, PEEK has been extensively used in diverse fields, such as heavy industry, aerospace, and biomaterials. Hydrophilic surface modification of PEEK is sometimes required when it is applied for biomedical purposes and microfluidic applications. Although various techniques for hydrophilic surface treatment techniques of PEEK have been developed, hydrophilicity properties are barely maintained even for a week. In this presentation, we quantitatively investigate aging phenomena of hydrophilically treated PEEK based on O₂ Plasma, UV irradiation, chemical etching, and polymer grafting method.