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【240】 Solvent induced crystallization and physical properties of silk sericin film

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A new solvent, formic acid, was used to fabricate sericin films. The effects of formic acid on the structural characteristics and mechanical properties of the sericin films were examined and compared with water. The gelation of sericin solution was retarded in formic acid compared to that of water. Sericin films cast from the formic acid exhibited a much higher crystallinity index than that produced from water. The tensile strength and elongation of the sericin films cast from the formic acid solution were more than double that of the sericin films cast from water. It is expected that high-crystallinity sericin films, which have significantly improved mechanical properties, produced by using formic acid could be utilized in biomedical and cosmetic applications

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