

CRYSTALLIZATION BEHAVIOUR, MORPHOLOGY AND PROPERTIES OF BIODEGRADABLE POLYMERS

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ABSTRACT

Biodegradable polymers have received more and more attention in the last two decades; however, their relatively poor mechanical properties, slow crystallization rate, and slow degradation rate have limited their further practical application. In our lab, we have been using copolymerization, polymer blending, and the fabrication of polymer nanocomposites to modify the physical properties and extend the application fields of biodegradable polymers. In this topic, I will briefly introduce our recent progress of crystallization behaviour, morphology and properties of biodegradable polymers.

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References:

1. Wu H, Qiu Z. *CrystEngComm* 2012; 14: 3586–3595.
2. Yu J, Qiu Z. *ACS Appl Mater Interfaces* 2011; 3: 890–897.
3. Yang Y, Qiu Z. *CrystEngComm* 2011; 13: 2408–2417.
4. Pan H, Qiu Z. *Macromolecules* 2010; 43: 1499–1506.
5. Zhao Y, Qiu Z, Yang W. *J Phys Chem B* 2008; 112: 16461–16468.
6. Lu J, Qiu Z, Yang W. *Macromolecules* 2008; 41: 141–148.
7. Qiu Z, Yan C, Lu J, Yang W. *Macromolecules* 2007; 40: 5047–5053.
8. Qiu Z, Yan C, Lu J, Yang W, Ikehara T, Nishi T. *J Phys Chem B* 2007; 111: 2783–2789.