Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Morphology and Performance of PLLA Based Porous Membranes by Phase Separation Control[1] QIAN XING, XIA DONG, Beijing National Laboratory for Molecular Sciences, CAS Key Laboratory of Engineering Plastics, Institute of Chemistry, Chinese Academy of Sciences, RONGBO LI, PetroChina Petrochemical Research Institute, CHARLES C. HAN, DUJIN WANG, Beijing National Laboratory for Molecular Sciences, CAS Key Laboratory of Engineering Plastics, Institute of Chemistry, Chinese Academy of Sciences — Poly (L-lactic acid) (PLLA) porous membranes with different morphologies and properties were prepared through immersion precipitation method. It has been proved that the rate and level of phase separation between PLLA/dioxane solution and coagulation baths were the original drive force for the ultimate structure and corresponding performance of PLLA membranes. The equilibrium thermodynamic phase diagram of PLLA/solvent/nonsolvent and the kinetic diffusion rate between solvent and nonsolvent were systematically investigated.

[1]NSFC 50925313 and 51173195

Xia Dong
Beijing National Laboratory for Molecular Sciences,
CAS Key Laboratory of Engineering Plastics, Institute of Chemistry,
Chinese Academy of Sciences

Date submitted: 17 Dec 2012 Electronic form version 1.4