

## Enantiomeric separation of DL-propranolol using cellulose membrane

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Since cellulose possesses multichiral carbon atoms in its molecular structure unit, an enantioselective membrane was prepared using cellulose as the membrane material. The flux and permselective properties of a membrane were studied using DL-propranolol racemate as the feed solution. In order to optimize the permselective properties of the cellulose membrane, the influences of different parameters such as operating pressure and feed concentration of racemates had been studied. The top surface and cross-section morphology of the resulting membrane were examined using scanning electron microscopy. An optical resolution of over 55% enantiomeric excess was achieved when the enantioselective membrane was prepared with 8.1wt% cellulose and 8.1wt% LiCl in the casting solution of N,N-dimethyl acetamide. This work indicates that the enantioselective cellulose membrane could soon become very attractive for industrial uses. The work is supported by National Natural Science Foundation (No. 21127012, 21675141) of China.

### Biography

Li-Ming Yuan was born in Chongqing, China, 1961. He received his Ph.D. from Beijing Institute of Technology (1997, China) and then spent about two years (2002-2004) at the Nagoya University (Japan) as a postdoctoral fellow (JSPS) with Prof. Y. Okamoto. In 1998 he was promoted to professor in Yunnan Normal University of China. His current research interests focus on the enantioseparations by chromatography, polymeric membrane and extraction.

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