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(54) **POLYIMIDE COPOLYMER AND FILM, PREPARATION METHODS THEREFOR AND APPLICATIONS THEREOF, AND SYSTEM AND METHOD FOR PURIFYING HELIUM**

(57) The present application relates to a polyimide random copolymer having a structure represented by formula (I). The present application also relates to a method for preparing the polyimide random copolymer, a membrane made of the polyimide random copolymer, and a method for preparing a polyimide-based hollow fiber membrane. The present application further relates to a system for purifying helium gas and a method for purifying helium gas.

EP 4 361 199 A8

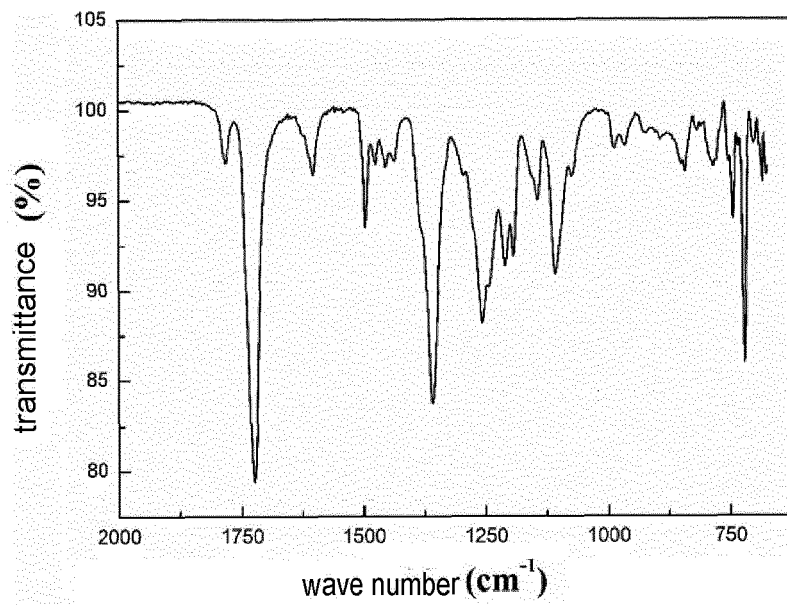
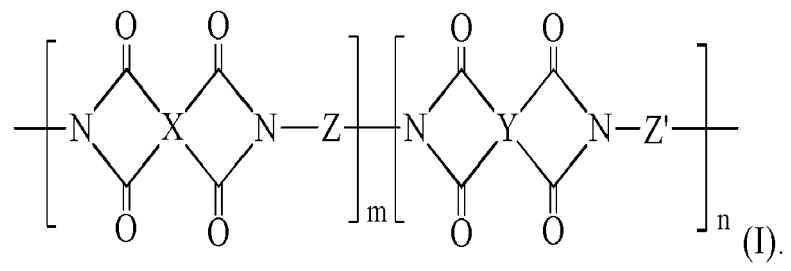


FIG. 3