# Shape and Size Control of Polyimides: Microspheres and Closed Foams

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Aromatic polyimides (PI), owing to their outstanding thermal stability, excellent mechanical properties, good electrical properties etc., have been extensively employed in many high-tech fields such as aeronautics, astronautics and microelectronics [1,2]. Usually, PI are used as continuous materials such as films, fibers, carbon fiber-reinforced composites, engineering plastics, adhesives, coating varnish. Recently, PI materials with special shapes and sizes such as microspheres, closed forms, aerogel etc. have been attracted considerable interests due to its potential applications in microelectronics, electro-optical display, and space exploration.

In this study, the preparation methods, characterization and properties of several polyimide shapes such as microspheres, closed forms and aerogel will be presented (Figure 1-3).

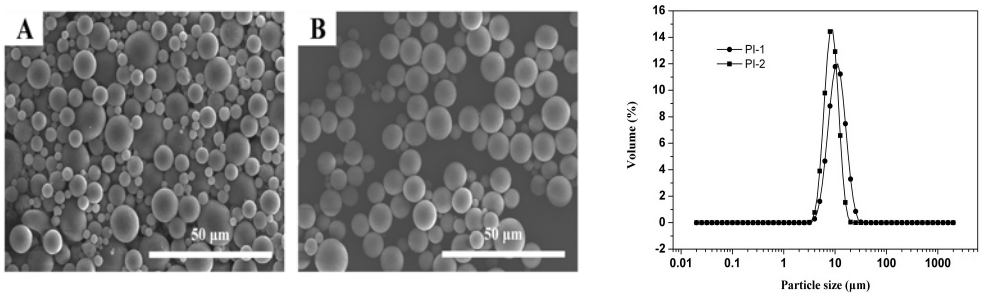


Figure 1 Polyimide microspheres with size of about 1-3 x10 um

Figure 2 Polyimide closed forms with thermal stability of 300 °C

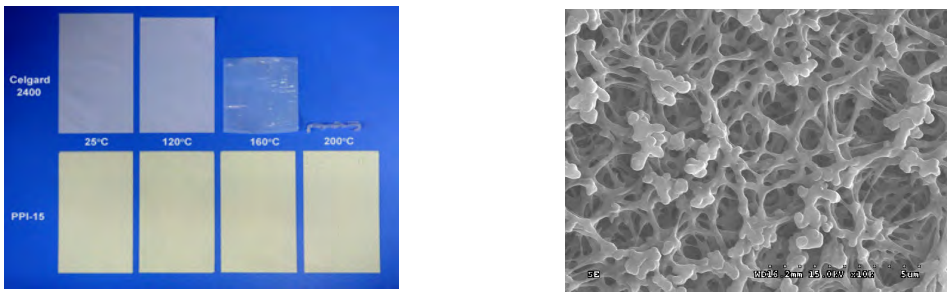


Figure 3 Polyimide micro-porous membrene with thermal stability of 200 °C