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Myung et al.

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(54) **HYDROPHOBIC AND HYDROPHILIC INTERPENETRATING POLYMER NETWORKS DERIVED FROM HYDROPHOBIC POLYMERS AND METHODS OF PREPARING THE SAME**

(75) Inventors: **David Myung**, Santa Clara, CA (US); **Michael J. Jaasma**, San Francisco, CA (US); **Lampros Kourtis**, Berkeley, CA (US); **Daniel Chang**, Danville, CA (US); **Curtis W. Frank**, Cupertino, CA (US)

(73) Assignee: **Biomimetica, Inc.**, Germantown, TN (US)

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See application file for complete search history.

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Primary Examiner — Patrick Ryan

Assistant Examiner — Aaron Gresco

(74) *Attorney, Agent, or Firm* — Shay Glenn LLP

(57) **ABSTRACT**

A composition of matter comprising a hydrophobic or hydrophilic (or both) interpenetrating polymer network containing a non-ionic/ionic polymer and a hydrophobic thermoset or thermoplastic polymer, articles made from such composition and methods of preparing such articles. The invention also includes a process for preparing a hydrophobic/hydrophilic IPN or semi-IPN from a hydrophobic thermoset or thermoplastic polymer including the steps of placing a non-ionizable/ionizable monomer solution in contact with a hydrophobic thermoset or thermoplastic polymer; diffusing the monomer solution into the hydrophobic thermoset or thermoplastic polymer; and polymerizing the monomers to form a penetrating polymer inside the hydrophobic thermoset or thermoplastic polymer, thereby forming the IPN or semi-IPN.

40 Claims, 63 Drawing Sheets

