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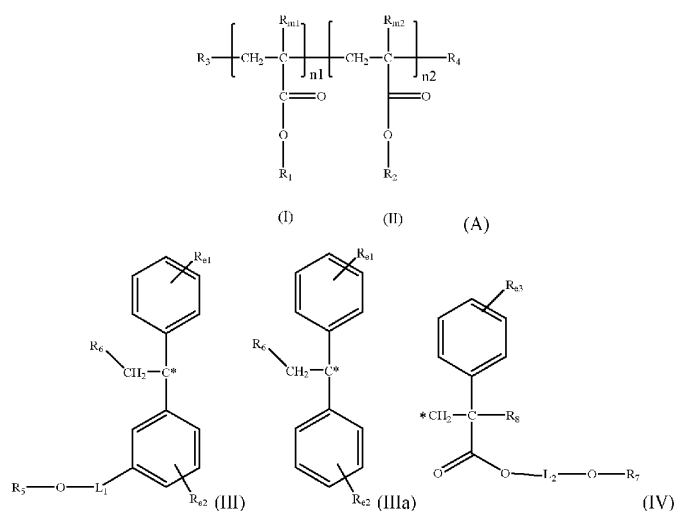
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(54) Title: NEUTRAL BRUSHES WITH TUNABLE POLARITY FOR SELF-ASSEMBLY OF BLOCK COPOLYMERS WITH
POLY(STYRENE) AND POLY(METHYL METHACRYLATE) CONTAINING SEGMENTS



(57) Abstract: The invention relates to a random copolymer of structure (A), comprising a repeat unit of structure (I), a repeat unit of structure (II), two end group R3 and R4, wherein end group R3, is a moiety of structure (IIIa), and is either a C-1 to C-8 alkyl, or is a moiety of structure (III), and end group end group R4, is a moiety derived from termination of anionic polymerization, and is either selected from the group consisting of H, a C-1 to C-8 alkyl, C-1 to C-8 alkylcarbonyl, a C-1 to C-8 trialkylsilyl, a C-1 to C-8 dialkylsilyl, a C-1 to C-8 monoalkylsilyl, silane, and a benzylic moiety, or is a moiety of structure (IV), and where both R3 and R4 cannot, simultaneously, be respectively selected from a moiety of structure (III), and a moiety of structure (IV), and either R3 is a moiety of structure (III) or R4 is or a moiety of structure (IV). This invention also pertains to composition comprising this copolymer and an organic spin casting solvent and the use of this composition to form a grafted neutral layer for use in DSA processing.

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