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14/039,809 27 September 2013 (27.09.2013) US(71) Applicant: **AZ ELECTRONIC MATERIALS (LUXEMBOURG) S.À.R.L.** [LU/LU]; 32-36, Boulevard d'Avranches, L-1160 Luxembourg (LU).(72) Inventors: **WU, Hengpeng**; 85 Beechwood Circle, Hillsborough, New Jersey 08844 (US). **YIN, Jian**; 36 Francis Drive, Bridgewater, New Jersey 08807 (US). **LIN, Guan-yang**; 97 Violet Court, Whitehouse Station, New Jersey 08889 (US). **KIM, Jihoon**; 406, North Wales, Pennsylvania 19454 (US). **SHAN, Jianhui**; 64 Mary Lynn Lane, Branchburg, New Jersey 08876 (US).(74) Agent: **FÉAUX DE LACROIX, Stefan**; Isenbruck Bösl Hörschler LLP Patentanwälte, EASTSITE ONE, Seckenheimer Landstraße 4, 68163 Mannheim (DE).

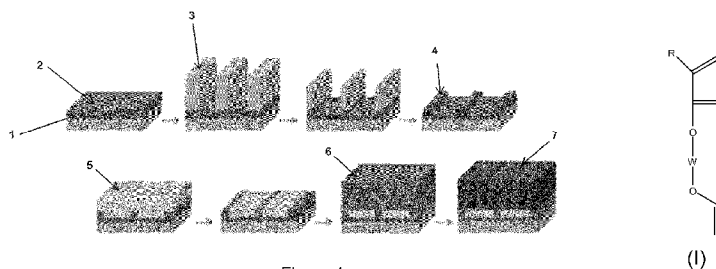
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(54) Title: UNDERLAYER COMPOSITION FOR PROMOTING SELF ASSEMBLY AND METHOD OF MAKING AND USING



(57) **Abstract:** Disclosed herein is a formulation for depositing a cured underlayer for promoting the formation of self assembled structures. The underlayer comprises: (a) a polymer comprising at least one pendant vinyl ether monomer repeat unit having the structure, (I): wherein R is chosen from H, C₁-C₄ alkyl, or halogen, and W is a divalent group chosen from C₁-C₆ alkylene, C₆-C₂₀ arylene, benzylene, or C₂-C₂₀ alkyleneoxyalkylene; (ii) optional thermal acid generator; and (c) a solvent. The invention also relates to processes of forming a pattern using the underlayer.