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(54) **HYBRID SCINTILLATORS FOR NEUTRON DISCRIMINATION**

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(58) **Field of Classification Search**
CPC C09K 11/06; G01T 1/2042; G01T 1/204
See application file for complete search history.

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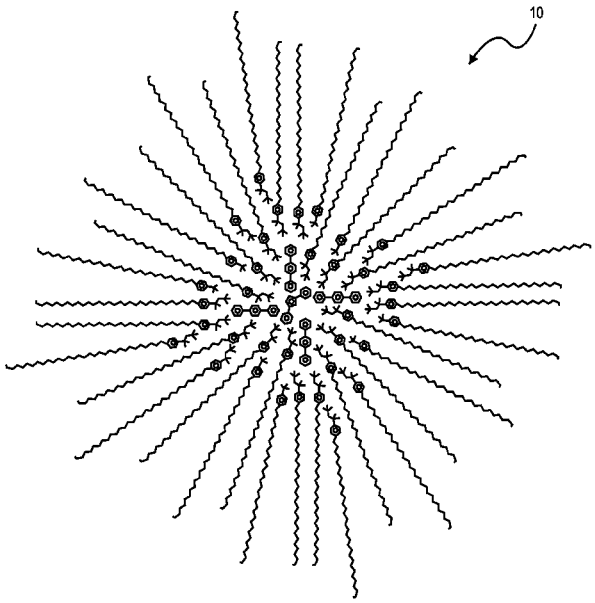
(57) **ABSTRACT**

A composition capable of producing a unique scintillation response to neutrons and gamma rays, comprising (i) at least one surfactant; (ii) a polar hydrogen-bonding solvent; and (iii) at least one luminophore. A method including combining at least one surfactant, a polar hydrogen-bonding solvent and at least one luminophore in a scintillation cell under vacuum or an inert atmosphere.

20 Claims, 4 Drawing Sheets