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- (71) Applicant: **BECTON, DICKINSON AND COMPANY**
[US/US]; 1 Becton Drive, MC110, Franklin Lakes, New
Jersey 07417-1880 (US).
- (72) Inventors: **BARTHOLOMEW, Glenn P.**; 995 Amethyst
Way, Escondido, California 92029 (US). **LIANG,
Yongchao**; 8 La Quinta, Irvine, California 92612 (US).
- (74) Agent: **FIELD, Bret E.**; 201 Redwood Shores Parkway,
Suite 200, Redwood City, California 94065 (US).
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(54) Title: WATER-SOLUBLE POLYMERIC DYES

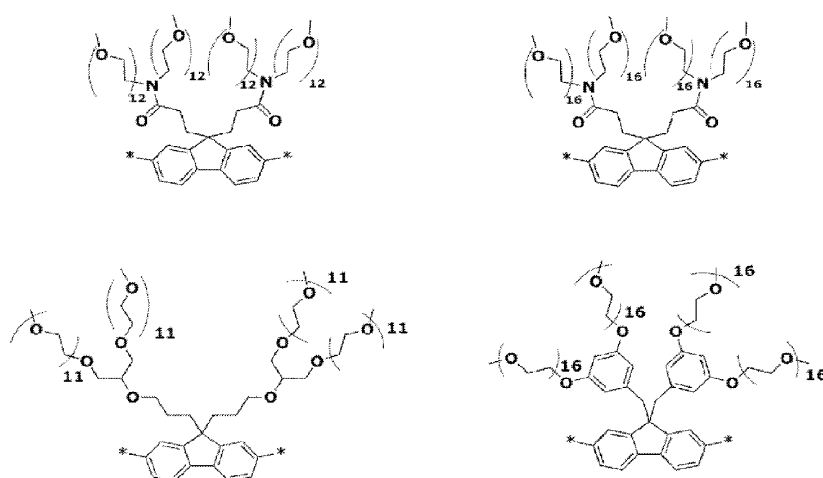


FIG. 1

(57) Abstract: Water soluble polymeric dyes and polymeric tandem dyes are provided. The polymeric dyes include a water solvated light harvesting multichromophore having a conjugated segment of aryl or heteroaryl co-monomers including branched non-ionic water soluble groups (WSG) comprising two or more water soluble polymers. In some cases, the branched non-ionic water soluble groups (WSG) of the present disclosure are capable of imparting solubility in water in excess of 50 mg/mL to the multichromophore. The polymeric tandem dyes further include a signaling chromophore covalently linked to the multichromophore in energy-receiving proximity therewith. Also provided are aggregation-resistant labelled specific binding members that include the subject water soluble polymeric dyes. Methods of evaluating a sample for the presence of a target analyte and methods of labelling a target molecule in which the subject polymeric dyes find use are also provided. Systems and kits for practicing the subject methods are also provided.

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