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(54) Title: COMPOSITIONS INCLUDING FUNCTIONAL GROUPS COUPLED TO SUBSTRATES, AND METHODS OF MAKING THE SAME

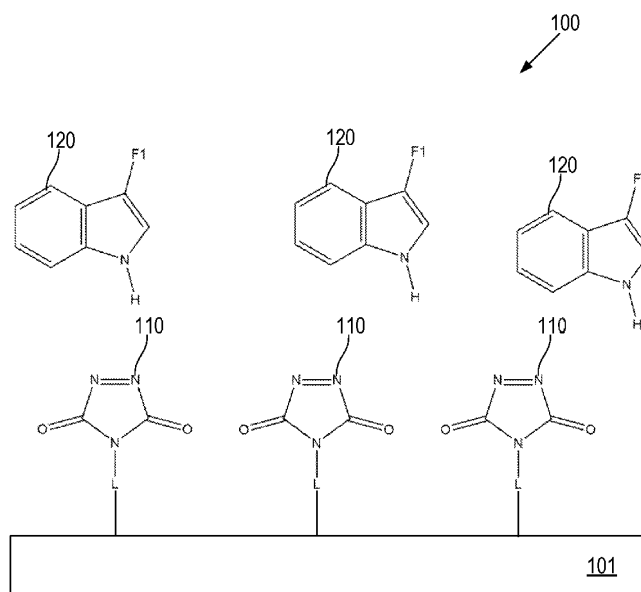


FIG. 1A

(57) Abstract: In one example, an unsaturated cyclic dione is coupled to the substrate, and is reacted with an indole or indazole including a first functional group to form a first adduct coupling the first functional group to the substrate. In another example, an unsaturated cyclic dione is coupled to a substrate and reacted with a diene including a functional group to form an adduct coupling the functional group to the substrate. In another example, an indole or indazole is coupled to a substrate, and is reacted with an unsaturated cyclic dione including an oligonucleotide to form an adduct coupling the oligonucleotide to the substrate. In another example, a diene is coupled to a substrate, and is reacted with an unsaturated cyclic dione including an oligonucleotide to form an adduct coupling the oligonucleotide to the substrate.

[Continued on next page]

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