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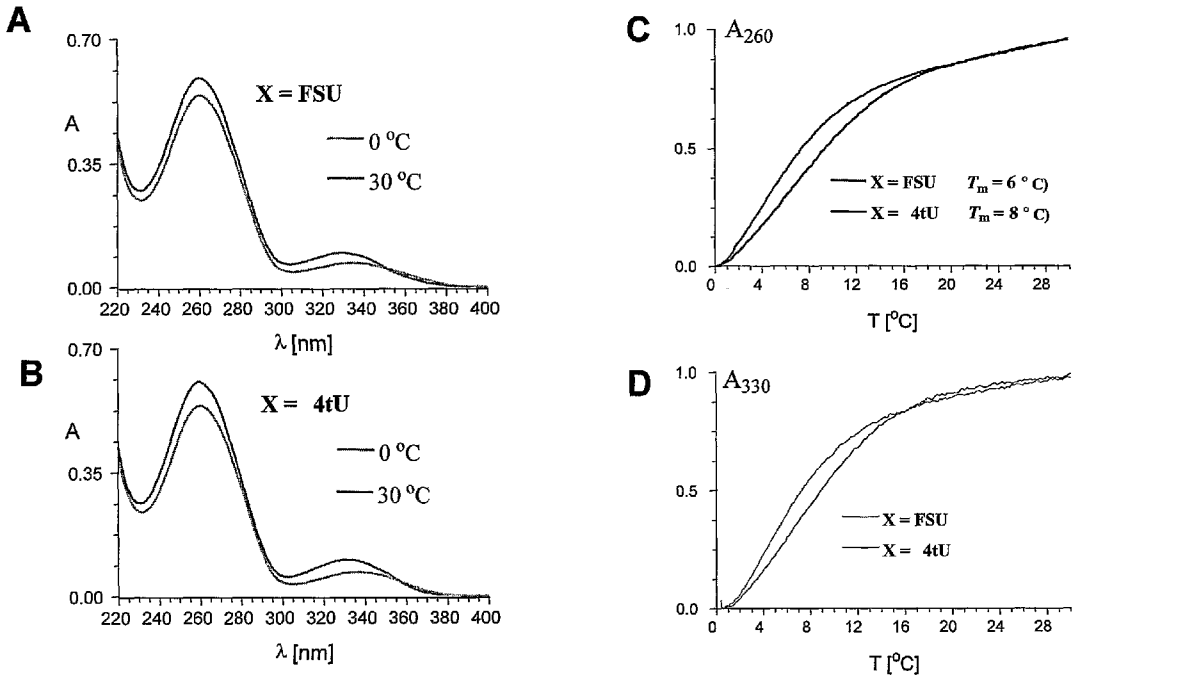
(54) Title: PHOTOCROSSLINKING PROBES AND USES OF THE SAME



(57) Abstract: A method of detecting a target nucleic acid is disclosed, the method comprising detecting the presence of a fluorescent covalent crosslinked product from non-fluorescent precursors. The fluorescent covalent crosslinked product comprises a novel fluorophore structure. Also described are methods of synthesizing probe molecules that can form fluorescent covalent crosslinked products with nucleic acid targets and arrays comprising such probes.

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FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER
IPC: **C07H 21/04**(2006.01);**C12Q 1/68**(2006.01)

USPC: 536/24.3;435/6
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 536/24.3; 435/6

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
CAPLUS, REGISTRY

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
O	SKALSKI et al. Fluorolink: A fluorophore created by a photocrosslinking reaction in DNA/RNA hybrids Abstract for Oral presentation No. 143C on 29 Aug 2005, The 230th ACS National Meeting held in Washington D.C., Aug 28-Sept 1, 2005, entire abstract.	1-45
A	MASTERNAK et al. Solvatochromism of a Novel Betaine Dye Derived from Purine J. Phys. Chem. A 2005, Vol. 109, pp. 759-76.	1-45
A	JARMULA et al. Relative free energies of binding to thymidylate synthase of 2- and/or 4-thio and/or 5-fluoro analogues of dUMP Journal of Computer-Aided Molecular Design, 2003, Vol. 17, pages 699-710.	5-7, 35-37, and 45

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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