

# PROPERTIES OF EO ACTIVE MOLECULAR GLASSES BASED ON INDANDIONE AND AZOBENZENE CHROMOPHORES

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Continuing previous research of EO active materials we have focused our attention on compounds employing two types of core NLO chromophores – indandione (A in scheme) and azobenzene (B). Coupling of them with bulky triphenyl, pentafluorophenylmethoxy ester, benzyloxy ester molecular fragments, as anti-crystallization agents allows us to obtain amorphous materials for potential nonlinear

optic (NLO) applications. In combination of these chromophores with

different substituents as electron donor, acceptor or amorphous structure

enhancers we obtained more than 20 compounds capable to form glassy

optical quality thin films by spin coating from chloroform or chlorobenzene solution. To

produce NLO active media thermo assisted electrical field poling procedure was applied to

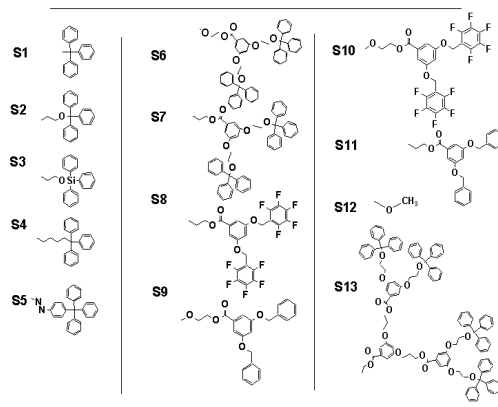
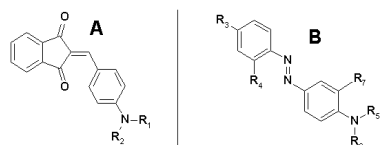
these films via custom build corona triode setup. NLO efficiency and polar

order (PO) thermal stability was evaluated by Maker fringe technique

and SHG efficiency with temperature scans. Relation of these properties with

structure of chromophore will be discussed.

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Scheme. Base structures of investigated compounds