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METHOD OF MAKING AN ORGANIC THIN FILM TRANSISTOR, AND ARTICLE MADE BY THE METHOD

Abstract

Organic thin film transistors having improved properties (e.g., on/off ratio > 10^5 at 20°C) are disclosed. The improved transistors comprise an organic active layer (16) of low conductivity (< 5 x 10^{-8} S/cm at 20°C, preferably less than 10^{-8} or even 10^{-9} S/cm). A method of producing such materials is disclosed. Rapid thermal annealing was found to have beneficial results. An exemplary and preferred material is α-hexathienylene (α-6T). The improved transistors are expected to find use for, e.g., active liquid crystal displays and for memories.

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