

Recent Trends in Electronic Materials for Flat Panel Display Industries

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The total worldwide electronic material sales is \$100 billion in 2005, it will become over \$160 billion in 2010 with the compound annual growth rate of 11%. The materials for FPD(Flat Panel Displays) represents for the 20% of total electronic materials market. A wide range of materials is used in the fabrication of flat panel displays. Among flat panel displays, TFT-LCD has made big success in sense of technologies and sales. Above 80% of total electronic materials of FPD is used for LCD and this trends may be continued for a while unless PDP or any other kinds of FPD achieve shortly radical growth. The key materials vary with the type of display. For low cost, high purity color, and high definition of LCD technology it is the key issue to develop big size LCD TV applications. In the meanwhile, material suppliers are faced with the radical swings of technology innovation and market situation. In that aspect, technological breakthrough is strongly needed to make a quantum leap for cost saving. Technology fusion and synergy effects are being researched in various fields for that purpose. Especially, optical films like polarizer, prism sheet, light enhancement film, and light guide sheet become major R&D target to realize that kinds of possibilities and many valuable trials and results are applied by mass production fields.