

# Fabrication and Characterization of Heterojunction of $Pb_{1-x}Sr_xS$ with $CdS$ and $Cd_{1-x}Zn_xS$

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## ABSTRACT

Alloy thin film of  $Pb_{1-x}Sr_xS$  have been prepared by spray pyrolysis technique. These films have variable energy band gap from 0.4 eV to 4.6 eV with the variation of stoichiometry. The photoconductivity is maximum for the films having stoichiometry  $x=0.4$ . Heterojunctions of  $Pb_{0.6}Sr_{0.4}S$  with  $CdS$  and  $Cd_{0.9}Zn_{0.1}S$  have been fabricated by spray pyrolysis method and current voltage characteristics for these heterojunctions have been studied.

**Keywords:** pyrolysis, stoichiometry, heterojunctions, spray pyrolysis.