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Fabrication of High Performance Low Temperature Poly-Si(LTPS) on Flexible Metal Foil

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We fabricated low temperature polycrystalline silicon TFT on metal foil substrate below 200℃. For preventing gate dielectric leakage current and enhancing electric field between gate and source, crystallizing and activation were processed before deposit gate dielectric. The n-channel TFTs with W/L=7/20 on metal foil exhibited the field-effect mobility of 206cm^2/Vs, the on/off current ratio of 10^6, the threshold voltage of 7V, and the subthreshold slope of 0.8V/dec.

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