

Fast UV response in ZnO films with Ag islands

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This study examined the effect of the Ag island structure on UV response in ZnO films. Application of Ag islands up to 1 μm reduces the relaxation time of the photocurrent to 1 c. Ag islands are an effective channel for electron run off. Annealing ZnO films coated with Ag in an open atmosphere at a temperature of 600 °C returns the films to their original state with prolonged relaxation of photocurrent. The obtained results can be used in the technology of building fast photodetectors based on ZnO.

Keywords: ZnO, Ag, islands, UV response, photoconductivity.

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