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Photoconductivity of Yttrium Praseodymium Gadolinium Oxalate Crystals SOOSY KURYAN, ROSALIN ABRAHAM, Research Scholar, JAYAKUMARI ISAC, Guide, SOOSY KURYAN TEAM — Crystals are pillars of modern technology. Yttrium Praseodymium Gadolinium oxalate (YPrGaOx) crystals were grown by gel method by the diffusion of Yttrium Chloride, Praseodymium Chloride, and Gadolinium Chloride into the set gel containing Oxalic acid. Silica gel method is capable of yielding crystals of high optical perfection and wide morphology. The growing crystals are held in the gel medium in a strain free manner and at the same time nucleation and super saturation are well controlled. Photo conductivity studies of these crystals revealed negative photoconductivity nature. The photocurrent is found to be less than the dark current at every applied electric field. Rare Earth compounds are known for their interesting electric, magnetic and luminescent properties. Recent investigations on the fluorescence of some rare earth oxalates suggest their potentiality for their optical applications. Rare Earth oxalates evoked greater attention because of their ionic conduction.

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