



جامعة جازان
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SEMINAR ANNOUNCEMENT

“Challenges in luminescence studies of new phosphor materials”

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Since the mid-1990s, efficient phosphor materials based on rare earth (RE) ions or rare earth activated host lattices have played a key role in emerging solid-state-lighting (SSL) technologies and development of solid state lasers. SSL is amongst the most energy-efficient and environmentally friendly lighting technology. SSL has already reached a high efficiency level (over 276 lm/W) at ever-decreasing costs. Besides the lifetime of LED lamps is several times longer than discharge lamps.

In this talk, emphasis is placed on cerium doped yttrium aluminum garnet (YAG) phosphors, because they are of the greatest importance for many lighting applications but we also discuss the influence of different activator ions on the morphostructural and luminescent characteristics of garnet type phosphor compounds. Additionally, as a novel class of inorganic phosphor, the alkali-alkaline earth borate phosphors are gaining huge attention due to their charming applications in solid state lighting (SSL) and display devices. Current research drive shows that phosphors have transformed the science and technology due to their high transparency over a broad spectral range and their flexibility in structure.