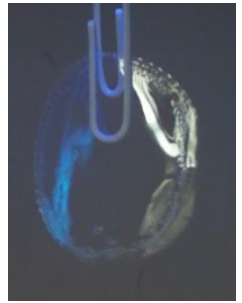
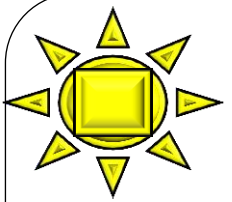
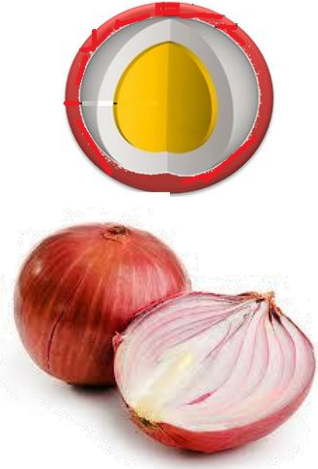


Solutions: Substitution of REE phosphors



(2)
Fluorescent
transparent
films

(1)
Hybrid Nano
Onion-like
phosphors

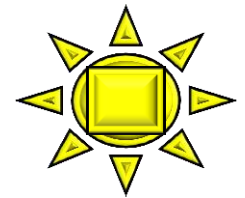


Main partners involved in these projects:



Solutions:

Recycle the optoelectronics devices and give new life to the old REE



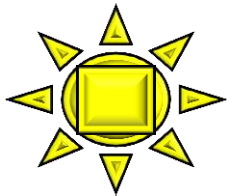
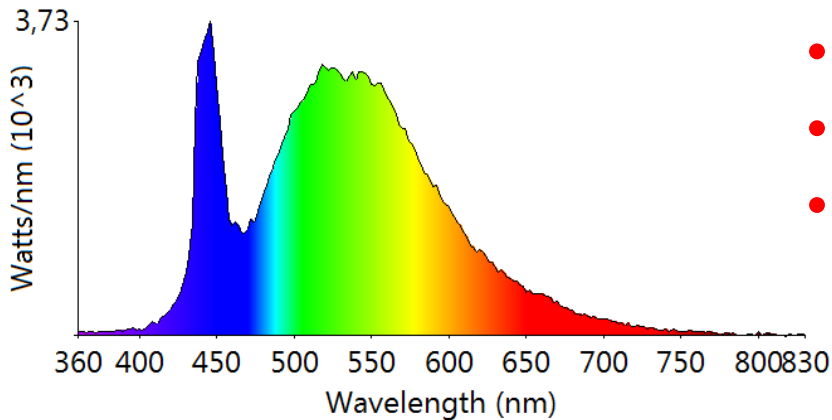
Main partners involved in this sector:



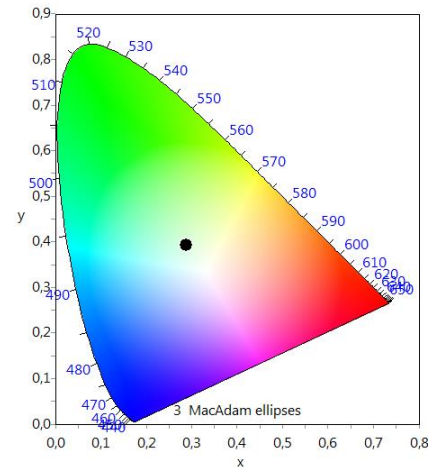
New Phosphors

RESET
RESET

Onion-like phosphors



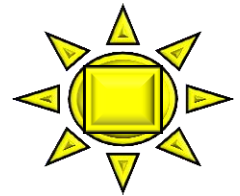
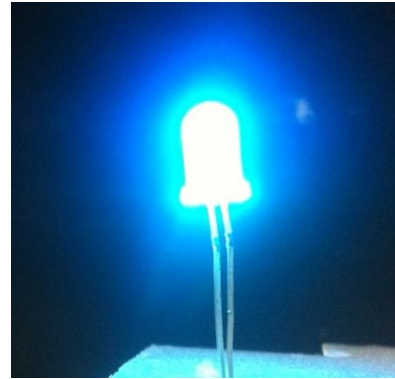
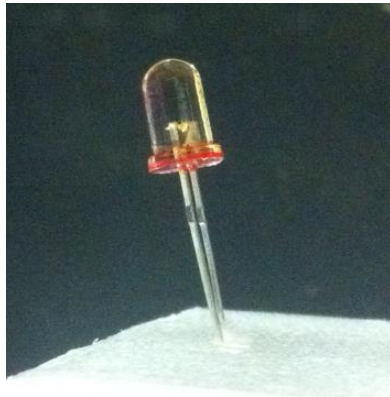
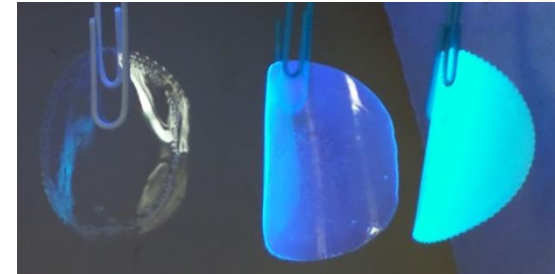
- Easy implementation
- White Emission
- Low temperature procedure
- Reduced Costs
- Environmental Friendly compounds



Fluorescent transparent films

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Hybrid films:
Dye + Polycarbonate



Emitting protective layer

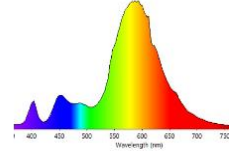
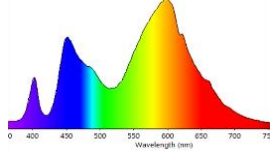
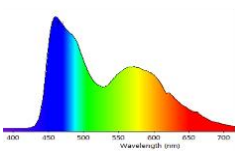
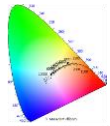
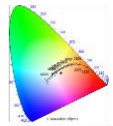
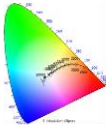
Blue LED as pumping source

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- Possibility to mix different dyes (different colors)
- Large area like tubes and panels

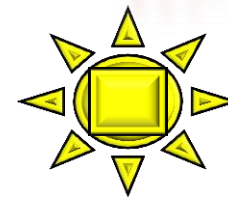


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Recycling



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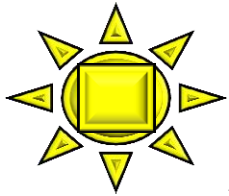
Mixed Rare earth oxides



Wasted mixed Rare earth oxides

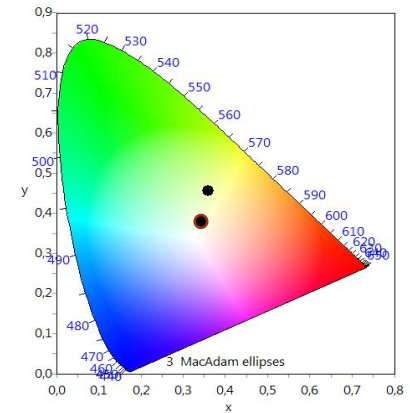


Chemical - Thermal
treatment

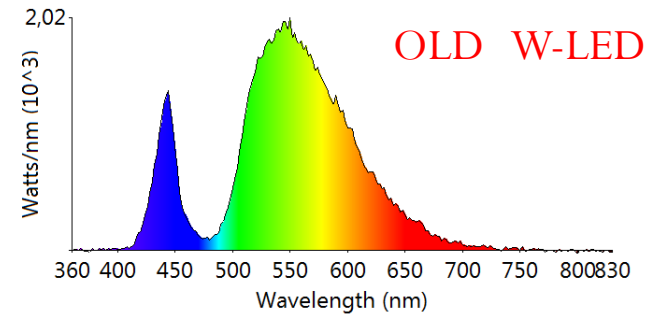
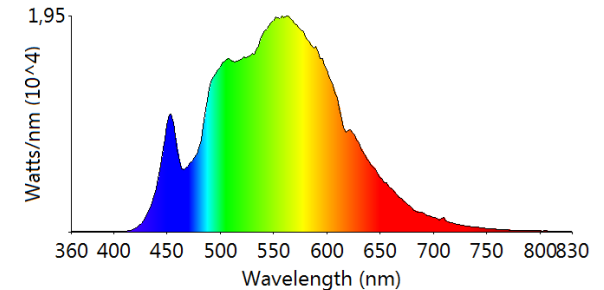


New phosphor for White
LED application

- **Better Colour Rendering Properties**



New W-LED





SPRING CONFERENCE: LILLE, 2-6 MAY 2016

Symposium E

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Substitution of Critical Raw Materials: Synthesis, Characterization and Processing of New Advanced Materials in optoelectronic and magnetic devices.

- Transparent conductive layers
- Rechargeable batteries,
- Phosphors for LED applications, Scintillators, Displays
- OLEDs
- Catalysis
- Photovoltaics
- Smart windows,
- Exchange-coupled nanocomposite magnets with less or no REEs
- New RE-free highly anisotropic magnetic materials
- New and energy efficient motors and generator technologies which do not depend on permanent magnets

Abstract submission deadline
15 January 2016