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NITRATE OF 2,6-DIACETYLPYRIDINE-BIS(PICOLINOYLHYDRAZONE)-(AQUA)(NITRATO)CADMIUM(II)–MONOHYDRATE WITH PHOTOLUMINESCENCE PROPERTIES

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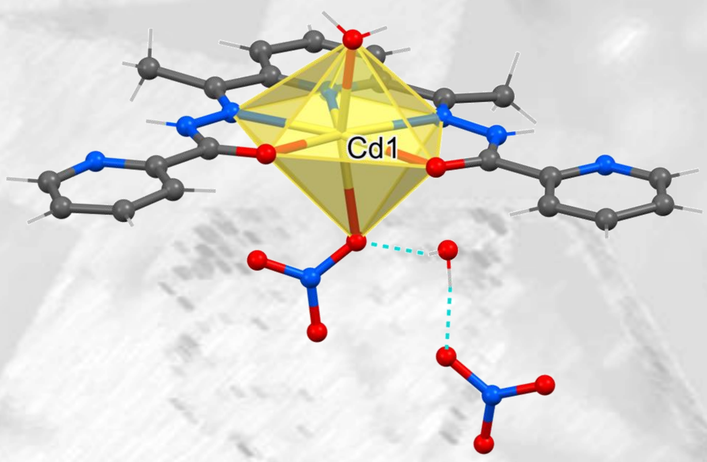
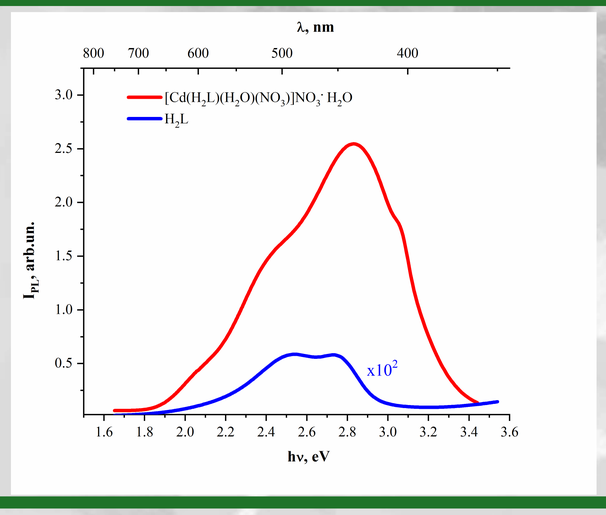
APPLICATION FIELDS: Optical industry

AIM: Chemical synthesis and characterization of new coordination compound with photoluminescence (PL) properties

SOLUTION: Template synthesis containing $Cd(NO_3)_2 \cdot 4H_2O$ salt, 2,6-diacetylpyridine and picolinic acid hydrazide in EtOH solution, lead to mononuclear compound *$[Cd(H_2L)(H_2O)_2(NO_3)]NO_3 \cdot H_2O$*, where H_2L = 2,6-diacetylpyridine bis(picolinoylhydrazone).





400-500 nm

ADVANTAGES: The claimed coordination compound nitrate of 2,6-diacetylpyridine-bis(picolinoylhydrazone)-(aqua)(nitrato)cadmium(II)–monohydrate exhibits PL activity about 300 times more intense than the free ligand (H_2L), a fact established by evaluating the effect of the flourescent emission in the range 400-500 nm which can be observed even with the naked eye. $[Cd(H_2L)(H_2O)_2(NO_3)]NO_3 \cdot H_2O$ is proposed as a useful material for obtaining blue light sources.

IMPLEMENTATION STAGE: At the laboratory level.

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