

## Room temperature near infrared luminescence of an U<sup>3+</sup> doped CsCdCl<sub>3</sub> potential laser crystal.

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### Streszczenie

Good quality U<sup>3+</sup> doped CsCdCl<sub>3</sub> single crystals with a 0.05 mol% U<sup>3+</sup> concentration have been obtained by the Bridgman–Stockbarger method. Luminescence spectra of the crystals were recorded at room temperature in the near infrared range. Excitation in the range of 5f26d1 bands at 514 nm produced a strong emission at 1.47 and 2.35 μm from the 4F<sub>3/2</sub> and 4I<sub>11/2</sub> levels to the 4I<sub>9/2</sub> ground level, respectively and at 3.15 μm from the 4F<sub>3/2</sub> level to the first excited component of the 4I<sub>11/2</sub> level. For the first time very large lifetimes of the U<sup>3+</sup> luminescence levels have been observed.

### Adres publiczny

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### Strona internetowa wydawcy

<http://www.elsevier.com>