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## Ultra-short pulses UV lasing in multifunctional Ce:LiY<sub>0.3</sub>Lu<sub>0.7</sub>F<sub>4</sub> active medium

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### Abstract

© 2016 Optical Society of America. The single pulse laser oscillation with  $400 \pm 10$  ps pulse duration at 311 nm from LiY<sub>0.3</sub>Lu<sub>0.7</sub>F<sub>4</sub>:Ce<sup>3+</sup> crystal was obtained from intracavity loss modulation via pump-induced color centers bleaching. Modulation of average losses is regulated via color centers concentration that determines the multifunctionality of solarizable LiY<sub>0.3</sub>Lu<sub>0.7</sub>F<sub>4</sub>:Ce<sup>3+</sup> active medium.

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