

## Accepted Manuscript

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PII: S0893-9659(18)30020-X  
DOI: <https://doi.org/10.1016/j.aml.2018.01.007>  
Reference: AML 5419

To appear in: *Applied Mathematics Letters*

Received date: 1 November 2017  
Accepted date: 14 January 2018

Please cite this article as: Y.-F. Wang, B. Guo, N. Liu, Optical rogue waves for the coherently coupled nonlinear Schrödinger equation with alternate signs of nonlinearities, *Appl. Math. Lett.* (2018), <https://doi.org/10.1016/j.aml.2018.01.007>

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# Optical rogue waves for the coherently coupled nonlinear Schrödinger equation with alternate signs of nonlinearities

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## Abstract

In this paper, optical rogue waves for the coherently coupled nonlinear Schrödinger equation with alternate signs of nonlinearities are investigated via Darboux transformation. We derive family of structures of rogue wave, including rogue waves with one peak and two valleys, bright rogue waves without valleys while with one peak or two peaks.

PACS numbers: 02.30.Ik, 05.45.Yv

Keywords: Coherently coupled nonlinear Schrödinger equation with alternate signs of nonlinearities; Darboux transformation; Rogue wave

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