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Global stability and optimal control of epidemic spreading on multiplex networks with nonlinear mutual interaction

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This paper has four highlights.

1. Two interacting pathogens spreading on multiplex networks is considered.
2. A novel nonlinear state-dependent infectious rate is proposed to describe the mutual interaction during the propagation of two pathogens.
3. The global stability of equilibrium points for the proposed system is analyzed.
4. An optimal treatment strategy for the proposed system is studied.

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