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A multi-mesh finite element method for phase-field based photonic band structure optimization

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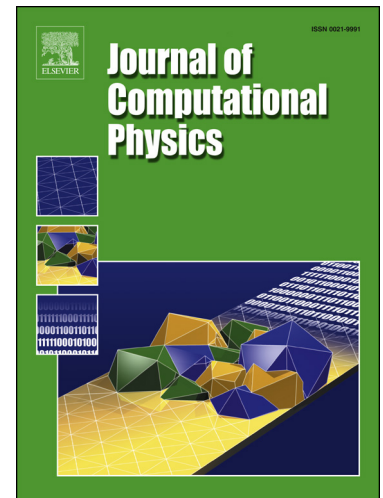
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## Highlights

- We develop a multi-mesh finite element method for phase-field model of photonic band gap optimization.
- The state equation is solved on a coarse mesh and the phase-field evolving on a fine mesh.
- The proposed multi-mesh approach saves up to 60 percent computational efforts in two-dimensional cases, compared with the single mesh scheme.

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