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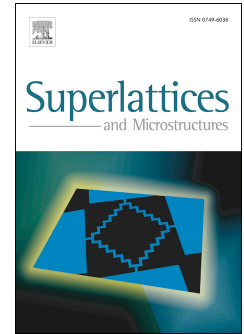
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## Effect of the shape of quantum dots on the third-harmonic generations

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**Abstract:** The effect of the shape of quantum dots on the third-harmonic generations is theoretically investigated. Using the effective-mass approximation, calculations are performed employing methods of both the compact-density-matrix and the matrix diagonalization. We discuss the properties of the third-harmonic generations (THG) coefficients as a function of the incident photon frequency in elliptic and triangular shaped quantum dots. The results reveal that the shape of quantum dots has a great influence on the third-harmonic generations.

**Keywords:** Quantum dot; The third-harmonic generations

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