

Introduction

Methods

Results

Conclusions

Acknowledgements

- (1) To characterize the long-lifetime microcavity structures
- (2) To measure the strength of coupling between the upper and lower polaritons
- (3) To try various spectroscopic techniques such as reflectivity, differential reflectivity, photoluminescence, and photoluminescence excitation to measure the polariton energy states

We successfully characterized the energy signatures of the polaritons including the upper polariton which has not been detected since the arrival long-lifetime polaritons in high-quality microcavities. Using photoluminescence excitation spectroscopy, we measured the strength of coupling of the photons and excitons in the semiconductors. Our results clearly show the anti-crossing of the lower and upper polariton with a Rabi splitting of 14 meV. This shows that the polaritons are in the strong coupling regime.

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