## nature portfolio

## Peer Review File

## A single-photon emitter coupled to a phononic-crystal resonator in the resolved-sideband regime

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This manuscript has been previously reviewed at another journal. This document only contains reviewer comments, rebuttal and decision letters for versions considered at Nature Communications.

This file contains all reviewer reports in order by version, followed by all author rebuttals in order by version.

Version 0:

Reviewer comments:

Reviewer #2

(Remarks to the Author)

Spinnler and coworkers submit a revised manuscript on their work on interfacing a single quantum emitter (in their case a semiconductor quantum dot, QD) to a phononic crystal cavity (PnCC).

As stated in my first review, I consider the work of highest technical quality. The results are of high relevance in the field and of broad interest to colleagues working on solid-state quantum technologies.

My main concern – shared by the other reviewers – was related to the framing of the work and that the presentation of the original manuscript was misleading. These points have been addressed. In particular the original Figure 4 was removed and the main text was amended.

In my view the manuscript still suggests that there is still a long way to go but overall I believe that the revision under consideration is a good fit to Nature Communications. I think that the present version is in good shape and recommend acceptance.

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