Bhattacharya *et al.* Reply: In conducting this study, we had fabricated and characterized multiple devices. The author of the preceding Comment [1] contacted us shortly after its publication. A representative set of this data obtained from different measurements was communicated to him. Soon after this, upon request from Physical Review Letters (PRL), we promptly sent the entire set of measured raw data corresponding to all the figures of the original Letter [2] to PRL. These are the two sets of data mentioned by the author of the Comment [1]. These data are also available to any other interested parties.

As mentioned in the text of the Letter [2], Figs. 3(a)–3(c) are "false color plots of the momentum distribution of *polariton emission intensity* obtained from angle resolved measurements for different injection currents." Our intention was to highlight the condensation process and not to duplicate data. The complete spectrum is seen in Fig. 1(c), while only the LP emission signal was plotted in the false color plots of Ref. [2], following the plotting technique suggested by a referee. The dynamic condensation process is clearly visible in the false color plots of Figs. 1(a)–1(b), here using the same color scale as the original figures.

The objective of Fig. 2(b) of Ref. [2] was to elucidate the emergence of closely spaced multiple peaks in the lower polariton spectra with increasing injection. These spectra were recorded with a lock-in amplifier and careful signal averaging was performed to reduce the noise level. The dc level of the signal is a function of the PMT voltage, amplifier gain, and sensitivity, and slit width in the measurement setup. We adjusted these parameters to obtain better signal to noise. Therefore, we disagree with the method of plotting the normalized plot in Fig. 2(b) of the Comment [1] (simply by dividing each by its peak value). The dc level should be taken as the average noise level for each spectra, as shown in Fig. 2(a).

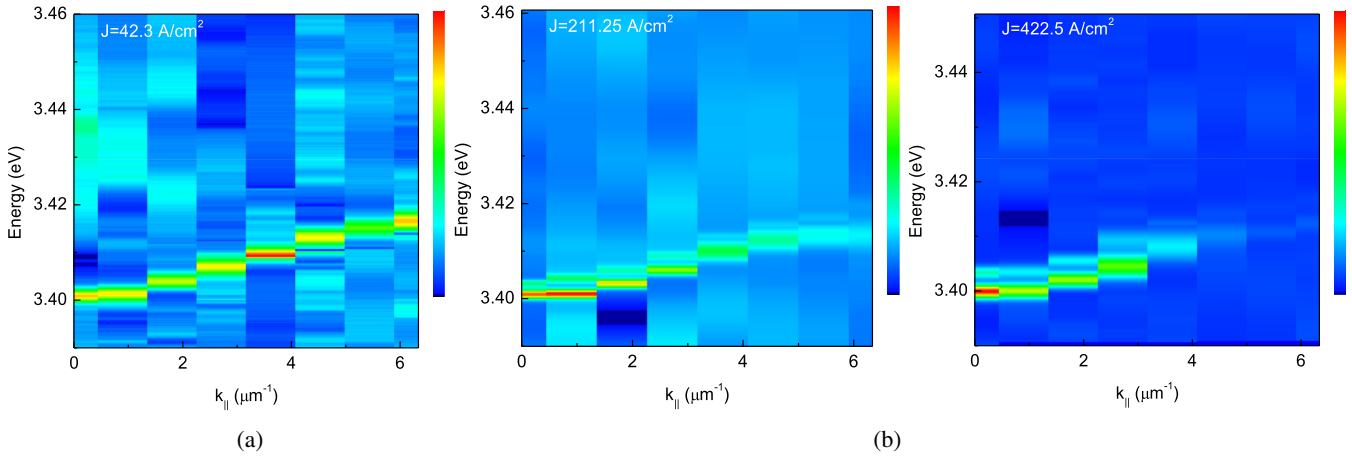

FIG. 1. (a)–(b) Reproduction of Figs. 3(b)–3(c) from Ref. [2] with the raw data.

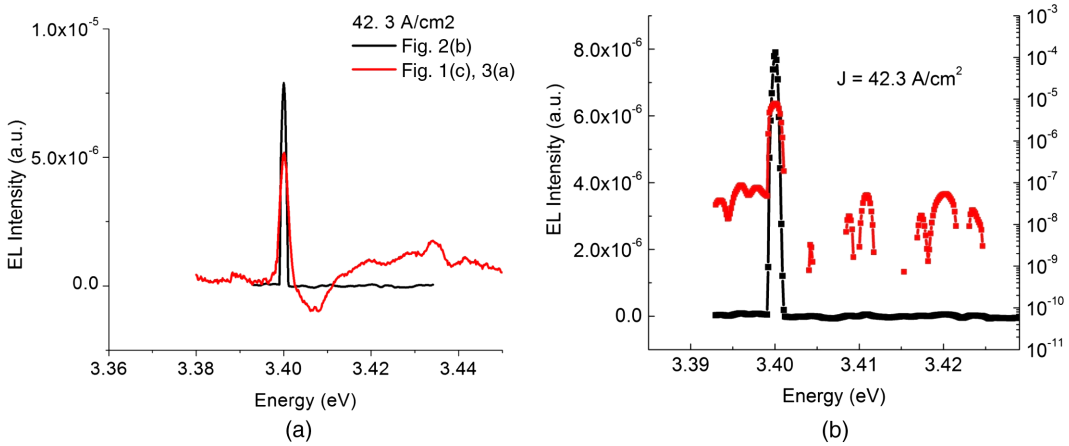

FIG. 2. (a) EL spectra from Fig. 1(c) and Fig. 2(b) of Ref. [2] after the two data sets are offset for clarity; (b) EL spectra from Fig. 2(b) of Ref. [2] in linear and logarithmic scales.

The data corresponding to Fig. 2(b) in [2] are as recorded and the spectra recorded at 42.3 A/cm^2 are reproduced here in linear and logarithmic scales [Fig. 2(b)]. The intensity (at the noise level) disappears in logarithmic scale at some energies since it is recorded negative on the phase sensitive lock-in amplifier. The measurements for the normal emission corresponding to Fig. 2(b) of Ref. [2] and the angle-resolved emission [Figs. 1(c) and 3(a) of [2]] were done in different setups and equipment settings and, hence, there are differences in the signal and noise levels. There is some noise associated with the spectrum, which has been referred to as background in the Comment. We are aware that the EL spectrum of Fig. 2(b) in the Comment [1] does not exhibit a simple Lorentzian or Gaussian line shape. It has been our observation that submicron scale GaN devices are sensitive to highly localized defects and heating with electrical injection at room temperature. This leads to some degradation and subtle changes in the emission spectra which we cannot always quantify or explain despite best, consistent experimental techniques. We believe that the observed multiple peaks result from defect related localization of polariton modes, as observed in self-assembled quantum dot lasers [3,4] and III-nitride quantum well lasers [5]. Therefore, the line shape may be the consequence of inadequate resolution compared to the linewidth of the spectrally narrowest modes, and has been observed in quantum dot luminescence and lasing [3,6].

The main conclusions of [2] stand. The data presented in our original Letter [2] unequivocally support polariton lasing.

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