Figure 6a–c show the theoretical predictions for the nonlocal resistance signal as a function of gate voltage for samples Q2197, Q2198, and Q2398, respectively. These can be directly compared with the experimental plots of Figures 3–4. Clearly, the theoretical results not only show a very similar behavior to the experimental resistance signal, but even have semiquantitative agreement. Furthermore, again in agreement with the experiment, the theoretically predicted signals are at least an order of magnitude stronger for the p- than for the n-regime, as a result of the much stronger difference in population of the valence band spin–orbit subbands. As in the experiment, Q2198 exhibits a larger calculated signal than Q2197. [...] We conclude that the numerical calculations are in good agreement with the experimental results and confirm that the observed effect is indeed the ballistic iSHIE.

Our numerical calculations agree well with our experimental results and confirm that the observed effect is the ballistic iSHIE. The theoretical predictions for the nonlocal resistance signal as a function of gate voltage for samples Q2197, Q2198 and Q2398 (Figure 6a–c) not only show a very similar behavior to the experimental resistance signal (Figures 3–4), but even have semiquantitative agreement. Furthermore, again in agreement with the experiment, the theoretically predicted signals are at least an order of magnitude stronger for the p- than for the n-regime, as a result of the much stronger difference in population of the valence band spin–orbit subbands. As in the experiment, Q2198 exhibits a larger calculated signal than Q2197. [...]