Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

The Impact of Electron-Phonon Coupling on the Figure of Merit of Ternary Monolayers Nb_2SiTe_4 and Nb_2GeTe_4

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Table S1: The calculated relaxation times at room temperatures using deformation potential theory (DPT). The values of carrier mobilities and their effective masses are taken from the previous study.

Monolayer	carrier type	μ (cm^2/V.s)		m (m_e)		τ (10^{-13} s)	
		μ_{xx}	μ_{yy}	m_{xx}	m_{yy}	τ_{xx}	τ_{yy}
Nb_2SiTe_4	*hole*	75.45	201	1.30	4.65	0.56	5.31
	electron	4570	4040	0.47	0.29	12.2	6.66
Nb_2GeTe_4	*hole*	192	406	0.77	4.60	0.84	10. 6
	electron	1910	2210	0.66	0.32	7.16	4.02

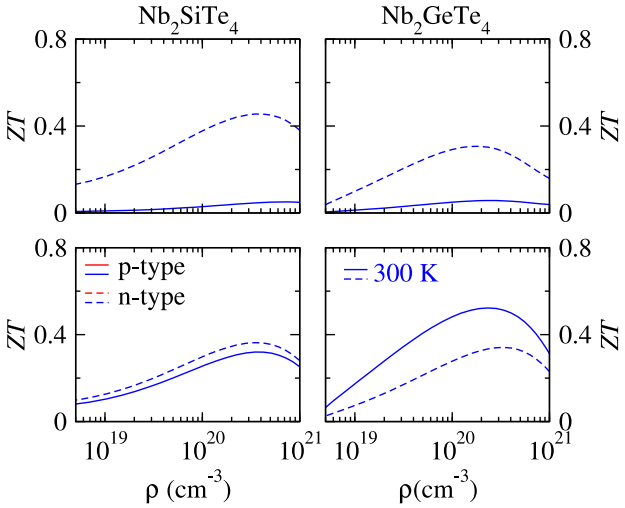

Fig. S1: The calculated figure of merit of Nb_2SiTe_4 and Nb_2GeTe_4 along x (1st row) and y (2nd row) direction. The values of τ are inserted as calculated with DPT.