Supplementary Information

Oxidation-enhanced thermoelectric efficiency in a two-dimensional phosphorene oxide

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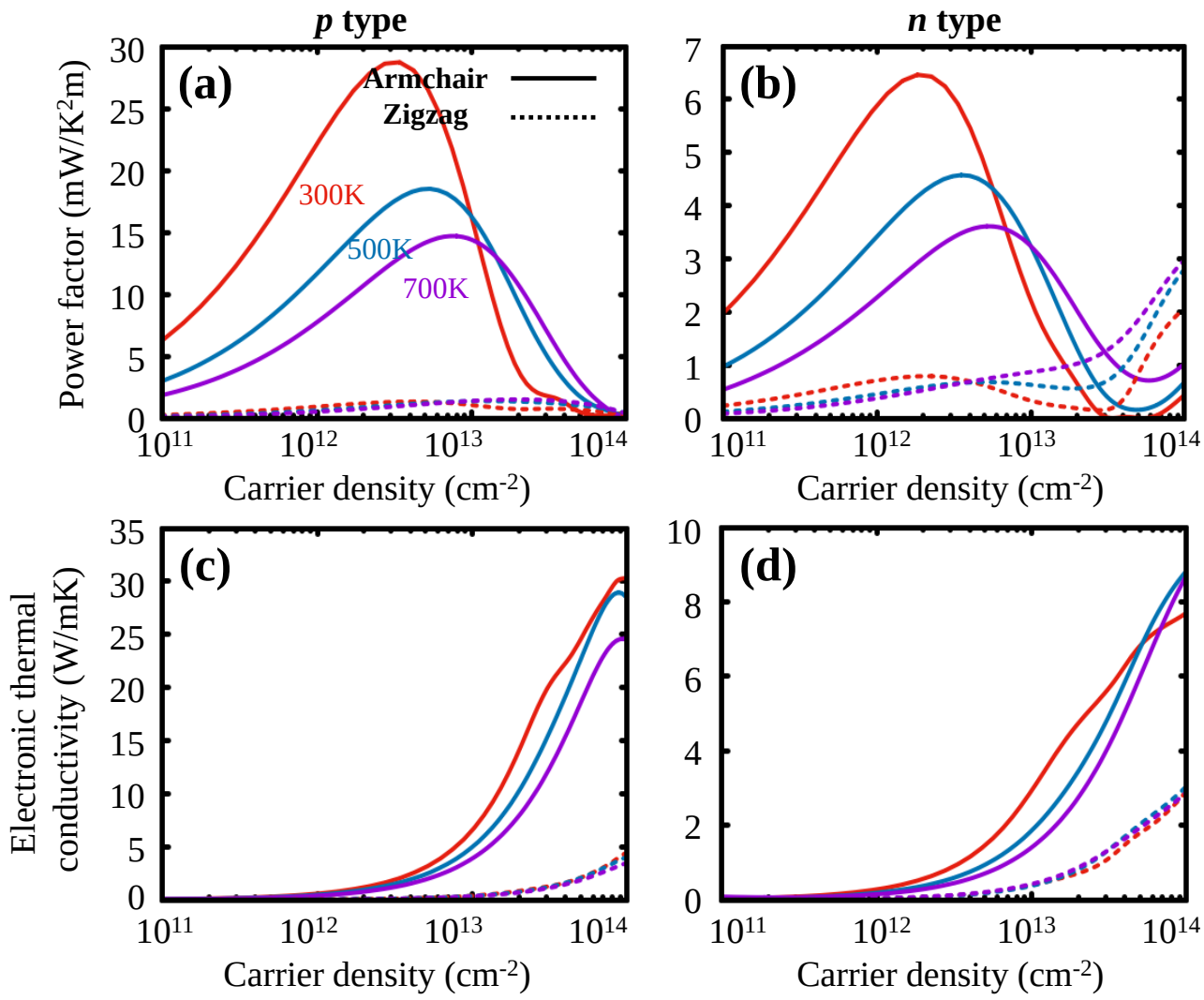

Figure S1. Power factors for (a) *p*-type and (b) *n*-type phosphorene and (c, d) their respective electronic thermal conductivities as a function of 2D carrier density. Solid and dashed lines denote these quantities computed along the armchair and zigzag transport directions at three different temperatures of 300, 500, and 700 K represented with the red, blue, and purple colors, respectively.

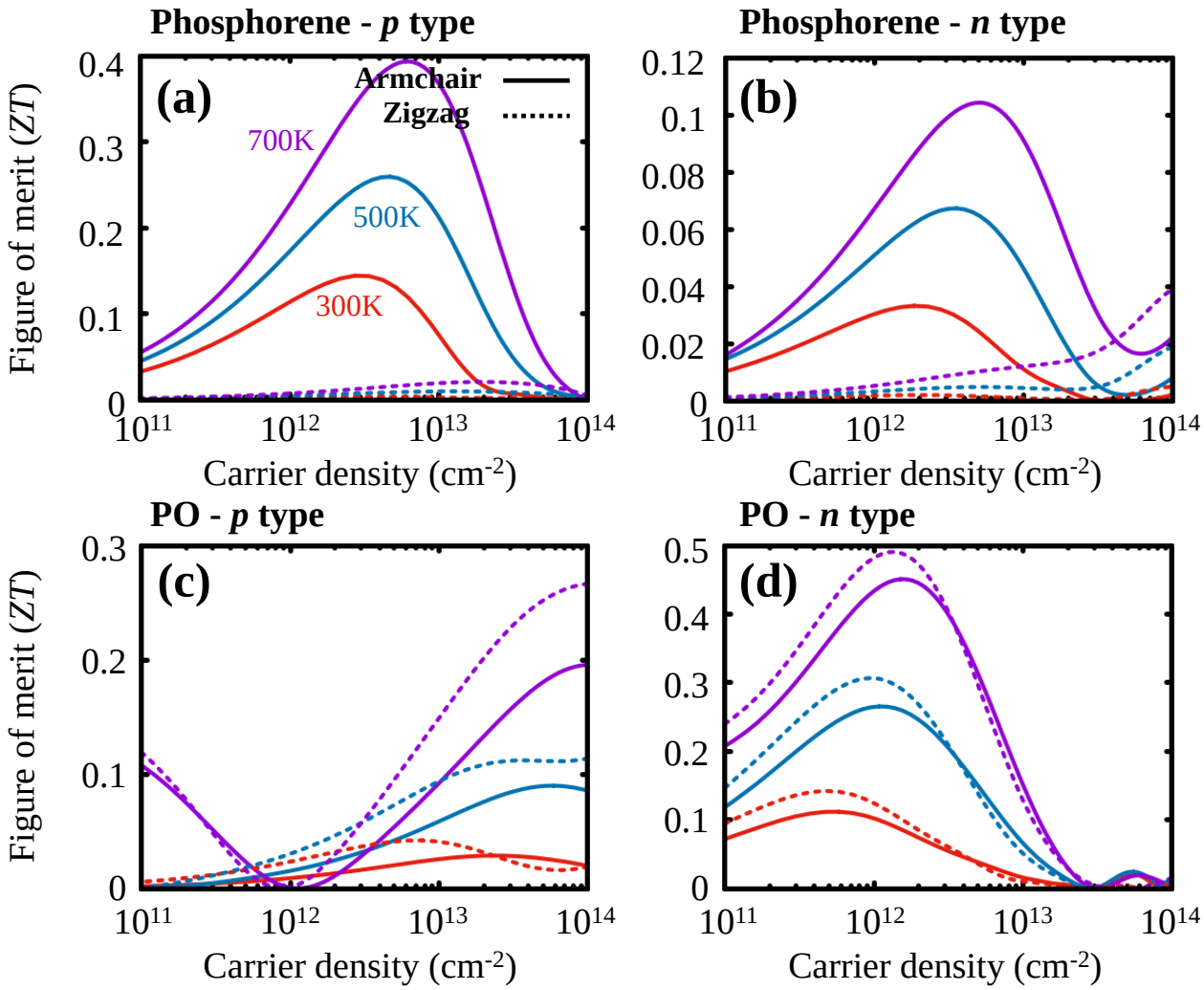

Figure S2. Thermoelectric figures of merit (ZT) of (a) p- and (b) n-doped phosphorene and (c, d) their PO counterparts as a function of 2D carrier density. Solid and dashed lines denote these quantities computed along the armchair and zigzag transport directions at three different temperatures of 300, 500, and 700 K represented with the red, blue, and purple colors, respectively.