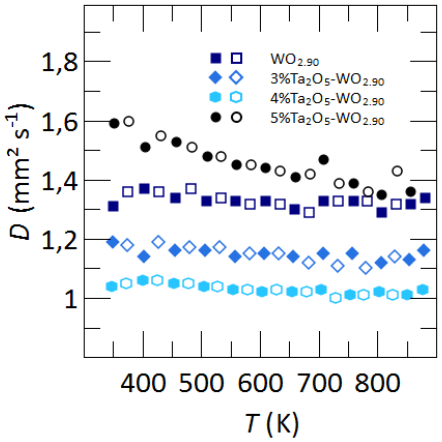
Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

SUPPORTING INFORMATION

Enhanced thermoelectric properties of the *n*-type Magnéli phase $WO_{2.90}$: Reduced thermal conductivity through microstructure engineering

Gregor Kieslich[a], Ulrich Burkhardt[b], Christina S. Birkel[c,d], Igor Veremchuk[b], Jason E. Douglas [c,e], Michael W. Gaultois[c,d], Ingo Lieberwirth[f], Ram Seshadri[c,d,e], Galen D. Stucky[c,d] , Yuri Grin[b]*, and Wolfgang Tremel[a]*



SI-Figure 1. Temperature dependence of the thermal diffusivities of the reference sample (black) and the samples containing Ta_2O_5 (blue).

SI-Table 1. Densities of the reference sample $WO_{2.90}$ and the Ta_2O_5 containing samples. Densities were obtained on polished pellets with a diameter of 20 mm using Archimedes principle. The theoretical density is 7.17 g cm^{-3}, (Ref. 43). For the calculation of the thermal conductivity, a relative density of 97% was assumed for all samples.

Sample	Absolute density (g cm^{-3})	Relative density
$WO_{2.90}$ (reference)	6.7	96%
3%Ta_2O_5-$WO_{2.90}$	7.0	98%
4%Ta_2O_5-$WO_{2.90}$	7.0	98%
5%Ta_2O_5-$WO_{2.90}$	6.7	96%