

Synergistic Effects of Functionalized WS₂ and SiO₂ Nanoparticles and a Phosphonium Ionic Liquid as Hybrid Additives of Low-Viscosity Lubricants

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Table S1. Dynamic viscosities of PAO6 based nanolubricants and PAO6 base oil.

	PAO6	0.1 wt% f-WS2 + 1 wt% IL	0.1 wt% f-SiO ₂ + 1 wt% IL	0.1 wt% f-WS2 + 0.1 wt% f-SiO ₂ + 1 wt% IL
T / K	η / mPa.s	η / mPa.s	η / mPa.s	η / mPa.s
298.15	137.92	150.32	151.07	151.48
303.15	102.84	112.36	113.19	113.22
308.15	78.146	84.328	86.152	86.291
313.15	60.358	65.911	66.498	66.762
318.15	47.546	51.861	52.534	52.684
323.15	37.704	40.567	41.872	41.823
328.15	30.404	31.823	32.924	33.945
333.15	24.843	25.938	27.071	27.736
338.15	20.539	21.784	22.319	22.927
343.15	17.168	18.126	19.256	19.259
348.15	14.495	15.127	16.468	16.527
353.15	12.359	12.874	13.828	13.887
358.15	10.625	11.024	11.919	11.962
363.15	9.2073	9.7895	10.412	10.487
368.15	8.0403	8.6448	9.1473	9.1515
373.15	7.07	7.7621	7.9894	8.0434
378.15	6.2617	6.6721	7.0812	7.0842
383.15	5.5817	6.0132	6.3732	6.4003
388.15	5.0078	5.4232	5.6852	5.6989
393.15	4.5212	4.9332	5.1216	5.1361