

**Supplementary file**

**Empirical correlations for density, viscosity, and thermal  
conductivity of pure gaseous hydrogen**

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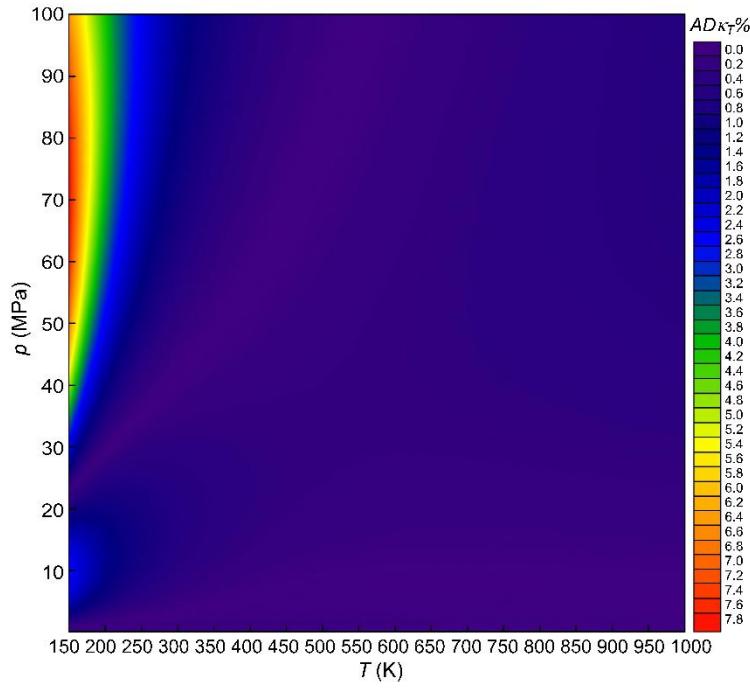
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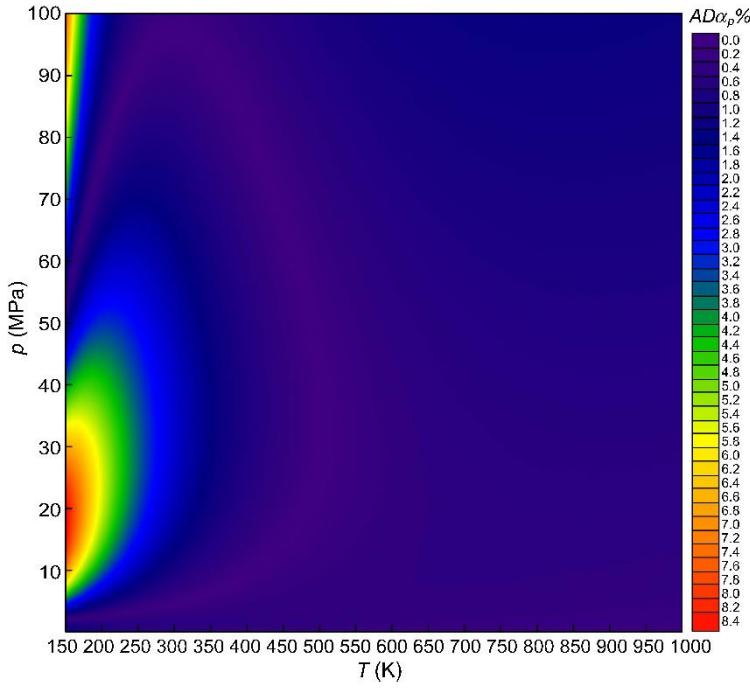
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conductivity of pure gaseous hydrogen. Advances in Geo-Energy Research, 2024, 11(1): 54-73.*

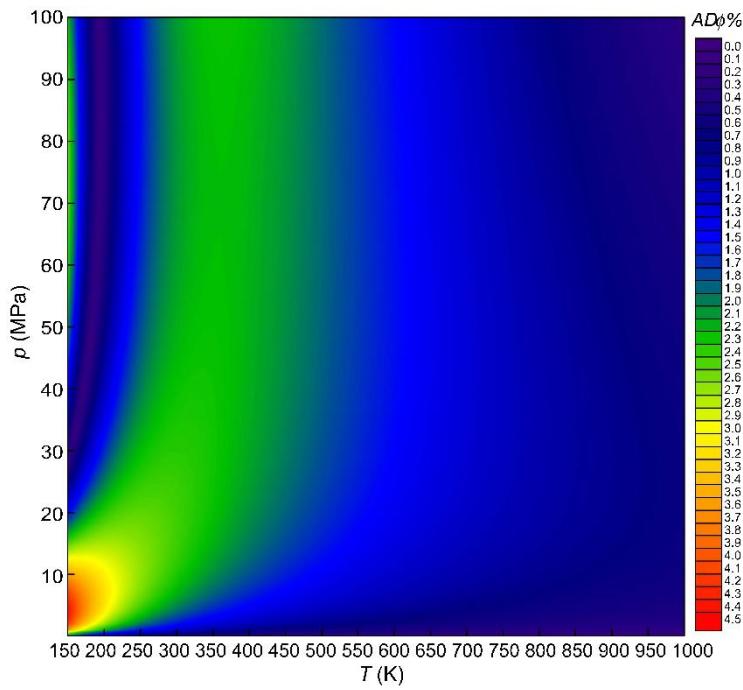
The link to this file is: <https://doi.org/10.46690/ager.2024.01.06>



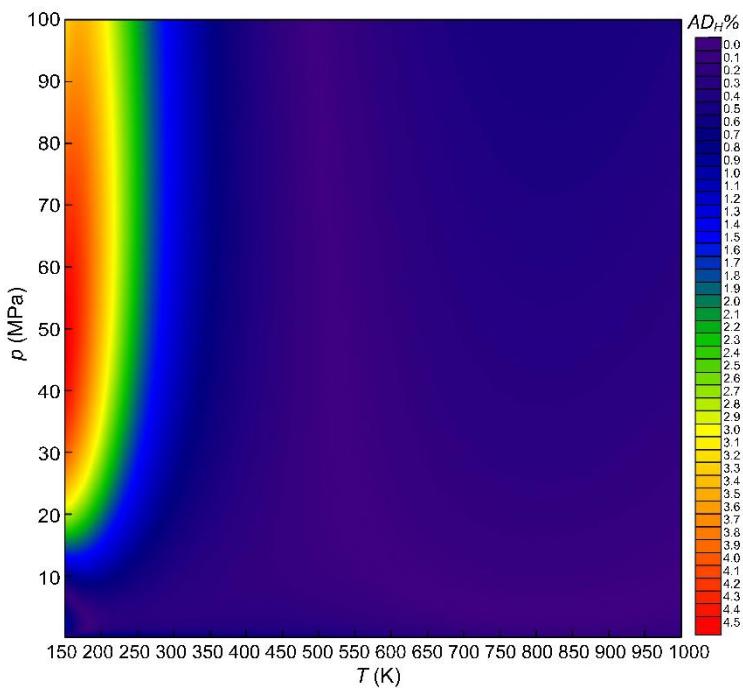
**Fig. S1.** AD% of Eq. (9) in the prediction of the isothermal compressibility coefficient versus data generated using REFPROP 10 (Lemmon et al., 2018).



**Fig. S2.** Comparison of the AD% from Eq. (12)'s predictions for the gas volume expansivity coefficient against data sourced from REFPROP 10 (Lemmon et al., 2018).



**Fig. S3.** AD% of Eq. (14) in predicting the fugacity coefficient versus data generated using REFPROP 10 (Lemmon et al., 2018).



**Fig. S4.** AD% of Eq. (16) in predicting the H<sub>2</sub> enthalpy (data generated using REFPROP 10 (Lemmon et al., 2018)).