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Sensitivity of Interfacial-tension Predictions to Parachor-method Parameters

[Kozo SATO](#)¹⁾

1) Geosystem Engineering, Graduate School of Engineering, The University of Tokyo

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The parachor method (PM) is widely used to predict interfacial tension (IFT) but may yield incorrect IFT values, and, thus, adjustment of the PM parameters may be necessary. The sensitivities of IFT predictions to the PM parameters were investigated by examining the Weinaug and Katz method (WKM) and the Lee and Chien method (LCM). Parameter adjustment of only the scaling exponent does not always yield good regression results, and including parachors (or related variables) in a set of regression parameters is recommended. The WKM may result in unrealistic parameter adjustment due to the absence of interrelation between the scaling exponent and the parachor. In contrast, the LCM honors the correct definition of the parachor and tends to yield acceptable IFT predictions within the limits of realistic parameter adjustment.

Keywords: [Interfacial tension](#), [Parachor](#), [Regression](#), [Interfacial tension prediction](#), [Parachor method](#)

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