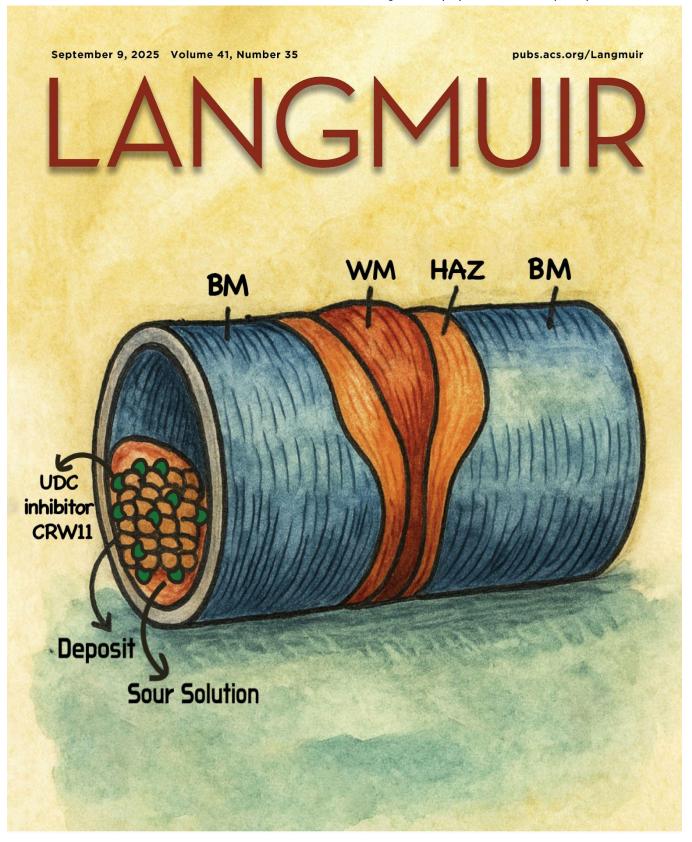
Adewale K. Ipadeola, Mostafa H. Sliem, Dana Abdeen, Nicholas Laycock, Ashwin RajKumar, <u>Phaneendra K. Yalavarthy</u>, and Aboubakr M. Abdullah, "Unmasking the Hidden Threat: Conductive Under-Deposits and Their Role in Preferential Weldment Corrosion of Carbon Steel under Sour Conditions," Langmuir 41(35), 23632-23651 (2025).





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About the Cover:

According to this study, preferential weldment corrosion (PWC) and pitting of carbon steel (CS) deposits under sour circumstances is exacerbated by FeS and FeS2 deposits, particularly in the heat-affected zone (HAZ), However, the PWC was effectively reduced by an amine-based CRW11 inhibitor. Machine learning models (decision tree and extreme gradient boost) accurately predicted the inhibition efficiency for practicable corrosion management.