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PUBLICATIONS:

1. Kan, A. T., F. Zhang, Z. Dai, N. Bhandari, F. Yan, Z. Zhang, Y. Liu, L. Wang, V. Bolanos and M. B. Tomson (2015) "Scale Prediction and Control at Ultra HTHP" (submitted) SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 13-15, 2015
2. Zhang, F., A. T. Kan, Z. Dai, F. Yan, N. Bhandari, Y. Liu, Z. Zhang, L. Wang, V. Bolanos, and M. B. Tomson (2015) "Interaction between Calcium and Sulfonated Polymer at High Temperature: Implications for Scale Inhibition Mechanism and Inhibitor Treatment" (submitted) SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 13-15, 2015
3. Yan, F., F. Zhang, N. Bhandari, Y. Liu, L. Wang, Z. Dai, Z. Zhang, V. Bolanos, A. T. Kan and M. B. Tomson (2015) "Interaction between Scale Inhibitors and Shale Minerals" (submitted) SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 13-15, 2015
4. Bhandari, N., A. T. Kan, Z. Dai, .F. Zhang, F. Yan, Y. Liu, Z. Zhang, L. Wang and M. B. Tomson (2015) "The Effect of Pressure and TDS on Barite Scaling Kinetics" (submitted) SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 13-15, 2015
5. Zhang, Z., Q. Wang, Y. Liu, Z. Dai, L. Wang, V. Bolanos, F. Zhang, F. Yan, N. Bhandari, A.T. Kan, and M.B. Tomson (2015) "Ferrous iron impact on phosphonate and polymeric BaSO₄ scale inhibitor performance at temperature from 77 to 200 F" (submitted) SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 13-15, 2015
6. Liu, Y., Z. Zhang, F. Yan, L. Wang, Z. Dai, F. Zhang, N. Bhandari, V. Bolanos, A.T. Kan and M. B. Tomson (2015) "An improved assay method for scale inhibitor analysis in the oil and gas field brine" (submitted) SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 13-15, 2015
7. Dai, Z., F. Zhang, L. Wang, Z. Zhang, Y. Liu, F. Yan, N. Bhandari, V. Bolanos, A. T. Kan and M. B. Tomson (2015) "Inhibition mechanism of different inhibitors based on the analysis of nucleation and crystal growth using novel crystal growth model and cryo-TEM measurement" (submitted) SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 13-15, 2015
8. Bolanos, V., Y. Liu, Z. Zhang, F. Yan, Z. Dai, L. Wang, F. Zhang, N. Bhandari, P. Guraieb, S. Razavi, R.C. Tomson, A. T. Kan and M. B. Tomson (2015) "Effect of the Degree of Hydrolysis of Partially Hydrolyzed Polyacrylamide on Friction Reducer Performance in Different Brines" (submitted) SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 13-15, 2015

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9. Dai, Z., W. Shi, N. Zhang, A. T. Kan, and M. B. Tomson (2014) "Improvement of thermodynamic modeling of calcium carbonate and calcium sulfates at high temperature and high pressure in mixed electrolytes" SPE169786(submitted)
10. Farrell, J., J. Fortner., S. Work., C. Avendano., N. Gomez., R. Z. Araiza., Q. Li., P. J.J. Álvarez., V. Colvin, A.T. Kan and M. B. Tomson (2014) "Arsenic removal by nanoscale magnetite enhanced sand columns in Guanajuato, Mexico" Environmental Engineering Science (Accepted) Manuscript ID: EES-2013-0425.R1
11. Hwang, C., G. Ruan, L. Wang, H. Zheng, E. Samuel, C. Xiang, W. Lu, W. Kasper, K. Huang, Z. Peng, Z. Schaefer, A.T. Kan, A. Martí, M. Wong, M.B. Tomson and J. Tour(2014) "Carbon-Based Nanoreporters Designed for Subsurface Hydrogen Sulfide Detection" ACS Applied Materials & Interfaces(Accepted) Manuscript ID: am-2014-009584
12. Zhang, P., A.T. Kan and M. B. Tomson (2014)"Oilfield Mineral Scale Control" Elsevier portal March 2014 (submitted)
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14. Kinia, G., J. Yu, L. Wang, A. T. Kan, S. L. Biswal, J. M. Tour, M. B. Tomson and M. S. Wong (2014)"Salt- and temperature-stable quantum dot nanoparticles for porous media flow" Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2014, 2, 492-500.
15. Dai, Z., W. Shi, A. T. Kan, N. Zhang and M. B. Tomson (2014) "Improvement of Thermodynamic Modeling of Calcium Carbonate and Calcium Sulfates at High Temperature and High Pressure in Mixed Electrolytes" SPE 169786 SPE International Conference on Oilfield Scale, Aberdeen, UK. May 14-15, 2014
16. Wang, L., A. T. Kan, Z. Zhang, F. Yan, Y. Liu, Z. Dai and M. B. Tomson (2014)" Field method for measurement of bicarbonate alkalinity" SPE 169758 SPE International Conference on Oilfield Scale, Aberdeen, UK. May 14-15, 2014
17. Zhang, F., C. Yan, N. Bhandari, A. T. Kan and M. B. Tomson (2014) "Barite Scaling Risk and Inhibition at High Temperature: A Study with New Apparatus" SPE 169771 SPE International Conference on Oilfield Scale, Aberdeen, UK. May 14-15, 2014
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19. Yan, F., A.T. Kan, and M.B. Tomson (2014) "Experimental and Modeling Study on Enhancement of Squeeze Treatment in Sandstone by the Addition of Zinc Ion" SPE 169753 SPE International Conference on Oilfield Scale, Aberdeen, UK. May 14-15, 2014
20. Liu, Y., A. T. Kan, C. Yan, F. Wang, L. Wang and M. B. Tomson (2014) "An Assay Method for the Detection of all Scale Inhibitors at Extremely low Concentration" SPE-169762 SPE International Conference on Oilfield Scale, Aberdeen, UK. May 14-15, 2014
21. Yan, C., A. T. Kan, F. Zhang, Y. Liu, R. C. Tomson and M. B. Tomson (2014) "Systematic Study of Barite Nucleation and Inhibition with Various Polymeric Scale Inhibitors by Novel Laser Apparatus" SPE 169787-MS SPE International Conference on Oilfield Scale, Aberdeen, UK. May 14-15, 2014
22. Zhang, N., A.T. Kan and Mason Tomson (2014) "Attachment/release of Phosphonate to/from a CaCO₃ Surface in Supersaturated Brine" SPE-169772-MS present as a Knowledge Sharing Poster at the SPE International Conference on Oilfield Scale, Aberdeen, UK. May 14-15, 2014
23. Contreras, E.Q., R. Posusta, J. Huang, C. Yan, D. K. Sharma, P. Guraieb, M. B. Tomson and R. C. Tomson (2014) "Optical Measure of Localized and Uniform Corrosion Rates of C1018 and 410 Alloys Using White Light Interferometry" (Accepted) Analytical Chemistry (ACS)
24. Huang, J., P. Guraieb, C. Yan, E. Contreras, M. B. Tomson and R. C. Tomson (2014) "Corrosion Testing of Deepwater Tubing Materials under Extreme Pressure and Temperature Conditions" OTC 25193 Offshore Technology Conference, Houston, Texas, USA. May 5-8, 2014
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29. Wang, W., A. T. Kan, W. Shi, C. Fan, and M. B. Tomson (2013) "Scaling Control for High Temperature and Pressure Oil Production" Chapter 5 in the book: "Mineral Scales in Biological and Industrial Systems" Z. Amjad (Ed), CRC Press Boca Raton, FL (in press)
30. Wang, W., A. T. Kan, C. Yan, and M. B. Tomson (2013) "The Use of Inhibition Kinetics and NMR Spectroscopy in Thermal Stability Study of Scale Inhibitors" Accepted for SPE J. 2014
31. Work, S., A. T. Kan and M.B. Tomson (2013) "Pretreatment of acid soluble minerals with tartaric acid for application in acid gas injection" (Accepted) Energy and the Environment 2013
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37. Kan, A.T., N. Zhang., W. Shi., K. Wang., L. Wang., C. Yan., F. Yan and M. B. Tomson(2013). (Rice University) R. C. Tomson., H. Zhu., S. M.A. Razavi (Shale Water Research Center) "Interrelationship of CO₂, Weak Acids, Bases, and pH in Scale Prediction and Control" SPE International Symposium on Oilfield Chemistry, Woodlands, TX. April 8-10, 2013
38. Wang, W., A. T. Kan, C. Yan, and M. B. Tomson(2013) "The Use of Inhibition Kinetics and NMR Spectroscopy in Thermal Stability Study of Scale Inhibitors" SPE 164047 SPE International Symposium on Oilfield Chemistry, Woodlands, TX April 8-10, 2013

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45. Hwang, C.C., L. Wang, W. Lu, G. Ruan, G.Kini, C. Xiang, E. L. G. Samuel, W. Shi, A. T. Kan, M. S. Wong, M. B. Tomson and J. M. Tour(2012) “Highly stable carbon nanoparticles designed for downhole hydrocarbon detection” Energy & Environmental Science 5, 8304–8309
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51. Shi, W., H. Lu, N. Zhang, C. Fan, A.T. Kan, and M. B. Tomson (2012) "Modeling the Thermodynamic Properties of Common Minerals at High Temperature, Pressure and Salinity with Complex Ions". Present at SPE International Conference on Oilfield Scale, Aberdeen, UK. On 30-31, May 2012
52. Alsaiani, H.A., N. Zhang, S. Work, A.T. Kan, and M. B. Tomson (SPE 155127-2012) "A New Correlation to Predict the Stoichiometry of Mixed Scale: Iron-Calcium Carbonate". Present at SPE International Conference on Oilfield Scale, Aberdeen, UK. On 30-31, May 2012
53. Zhang, N., A.T. Kan, Shi, W. Alsaiani, H. and M. B. Tomson (SPE-155263-2012) "A novel approach to the study of CaCO₃ precipitation kinetics on carbon steel pipe". Present at SPE International Conference on Oilfield Scale, Aberdeen, UK. On 30-31, May 2012
54. Wang, W., A.T. Kan, M.B. Tomson, (SPE 155108-2012) "A Novel and Comprehensive Study of Polymeric and Traditional Phosphonate Inhibitors for High Temperature Scale Control". Present at SPE International Conference on Oilfield Scale, Aberdeen, UK, 30-31 May 2012.
55. Djamali, E., H. Lu, A.T. Kan, and M. B. Tomson (SPE 155042-2012) "Effects of Hydrate Inhibitors on the Solubility of Barite and Halite in Produced Water". Present at SPE International Conference on Oilfield Scale, Aberdeen, UK. On 30-31, May 2012
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73. Zhang, P., A. T. Kan, C. Fan, S. N. Work, J. Yu, H. Lu, H. A. Alsaïari and M. B. Tomson SPE 130639. Silica-templated synthesis of novel zinc-DTPMP nanoparticles, their transport in carbonate and sandstone porous media and scale inhibition. SPE International Conference on Oilfield Scale held in Aberdeen, United Kingdom, 26–27 May 2010.
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