SLURRY PHASE IRON CATALYSTS FOR INDIRECT COAL LIQUEFACTION

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Abstract

This report describes research conducted to support the DOE program in indirect coal liquefaction. Specifically, we have studied the attrition behavior of iron Fischer-Tropsch catalysts, their interaction with the silica binder and the evolution of iron phases in a synthesis gas conversion process. The results provide significant insight into factors that should be considered in the design of catalysts for converting coal based syngas into liquid fuels.

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Appendix A:	Hien N. Pham, Alexander Viergutz, and Abhaya K. Datye, "Improving the Attrition Resistance of Slurry Phase Heterogeneous Catalysts," submitted to Powder Technology.
Appendix B:	Pham, H., Reardon, J. and Datye, A. K., "Measuring the Attrition Resistance of Fe F-T catalysts," Powder Technology, in press.
Appendix C:	Jin, Y. and Datye, A. K., "Phase transformations in Fe F-T catalysts," International Congress of Electron Microscopy, Cancun 1998, vol II, page 391, Institute of Physics Publishing, 1998.
Appendix D:	Jin, Y. and Datye, A. K., "Characterization of Bubble Column Slurry Phase Iron Fischer-Tropsch Catalysts, Natural Gas Conversion V, Stud. Surf. Sci. Catal., vol 119, page 209, 1998.
Appendix E:	Mansker, L. D., Jin, Y., Bukur, D. B. and Datye, A. K., "Characterization of Fe Fischer-Tropsch Catalysts," submitted to the special issue of Applied Catalysis being edited by Prof. Hans Schulz.