

REFERENCES

- Afonso, J.C., Schmal, M., and Frety, R. The Chemistry of Coke Deposits Formed on a Pt-Sn Catalyst During Dehydrogenation of n-Alkanes to mono-Olefins. Fuel Processing Technology 41 (1994) : 13-25.
- Arisara Suthasut Butane Dehydrogenation over Platinum Catalyst : Influence of promoter on activity and coking Master's Thesis, Chulalongkorn University, 1998.
- Barbier, J., Churin, E., Marecot, P., and Menezo, J.C. Deactivation by Coking of Platinum / Alumina Catalysts : Effects of Operating Temperature and Pressure. Appl. Catal. 36 (1990) : 277-285.
- Barbier, J., Churin, E., Parera, J.M., and Riviere, J. Characterization of Coke by Hydrogen and Carbon Analysis. React. Kinet. Catal. Lett. 29, 2 (1985) : 323-330.
- Barbier, J., Corro, G., Marecot, P., Bournonville, J.P., and Franck, J.P. Structure Sensitivity and Coke Formation on Pt/Al₂O₃ Catalysts. React. Kinet.Catal. Lett. 28, 2 (1985) : 245-250.
- Barbier, J., Corro, G., and Zhang, Y. Coke Formation on Platinum-Alumina Catalyst of Wide Varying Dispersion. Appl. Catal. 13 (1985) : 245-255.
- Basso, T.C., Zhang, Z., and Sachtler, W.M.H. Characterization by Pulsed Oxidation of Coke on Platinum/Alumina. Appl. Catal. 79 (1991) : 227-240.
- Beltramini, J.N., Parera, J.M., Churin, E.J., and Traffano, E.M. Influence of Pt Concentration on Activity and Combustion of Coke on Pt/Al₂O₃. Appl.Catal. 19 (1985) : 203-206.

- Biloen, P., Dautzenberg, F.M., and Sachtler, W.M.H. Catalytic Dehydrogenation of Propane to Propene over Platinum and Platinum-Gold Alloys. J.Catal. 50 (1977) : 77-86.
- Bond, G.C., Dias, C.R., and Portela, M.F. Characterization of Carbonaceous Deposits by Temperature-Programmed Oxidation. J. Catal. 156 (1995) : 295-297.
- Borio, D.O., Daniel, Menendez, M., and Santamaria, J. Simulation and Optimization of a Fixed Bed Reactor Operating in Coking-Regeneration Cycles. Ind. Eng. Chem. Res. 31 (1992) : 2699-2707.
- Burch, R.. Platinum-Tin Reforming Catalysts I. The Oxidation State of Tin and the Interaction between Platinum and Tin. J. Catal. 71 (1981) : 348-359.
- Burch, R., and Garla, L.C. Platinum-Tin Reforming Catalysts II. Activity and Selectivity in Hydrocarbon Reactions. J. Catal. 71 (1981) : 360-372.
- Caruso, F., Jablonski, E.L., Grau, J.M., and Parera, J.M. Crystallinity of Coke on Platinum-Rhenium/Alumina Reforming Catalyst during the Commercial Cycle. Appl.Catal. 51 (1989) : 195-202.
- Cortright, R.D., and Dumesic, J.A. Effects of Potassium on Silica-Supported Pt and Pt/Sn Catalysts for Isobutane Dehydrogenation. J. Catal. 157 (1995) : 576-583.
- Dautzenberg, F.M., Helle, J.N., Biloen, P., and Sachtler, W.M.H. Conversion of n-Hexane over Monofunctional Supported and Unsupported PtSn Catalysts. J. Catal. 63 (1980) : 119-128.
- Duprez, D., Hadj-Aissa, M., and Barbier, J. Effect of Steam on the Coking of Platinum Catalysts I. Inhibiting Effect of Steam at Low Partial Pressure for the Dehydrogenation of Cyclopentane and the Coking Reaction. Appl. Catal. 49 (1989) : 67-74.
- Froment, G.F., and Bischoff, K.B. Chemical Reactor Analysis and Design. 2nd ed. John Wiley and Sons, Inc., 1990.

- Gorriz, O.F., Corberan, V.C., and Fierro, J.L. Propane Dehydrogenation and Coke Formation on Chromia-Alumina Catalysts : Effect of Reductive Pretreatments. Ind. Eng. Chem. Res. 31 (1992) : 2670-2674.
- Haldeman, R.C., and Botty, M.C. J. Phys. Chem. 63 (1959) : 489.
- Hughes, R. Deactivation of Catalysts London : Academic Press, Inc., 1984.
- Larsson, M., Hulten, M., Blekkan, E.A., and Andersson, B. The Effect of Reaction Conditions and Time on Stream on the Coke Formed during Propane Dehydrogenation. J. Catal. 164 (1996) : 44-53.
- Le Page, J.F. Applied Heterogeneous Catalysis: Design Manufacture Use of Solid Catalysts Paris: Editions Technip, 1987.
- Lieske, H., Lietz, G., Spindler, H., and Volter, J. Reactions of Platinum in Oxygen and Hydrogen Treated Pt/ γ -Al₂O₃ Catalysts I. Temperature-Programmed Reduction, Adsorption, and Redispersion of Platinum. J. Catal. 81 (1983) : 8-16.
- Lieske, H., Sarkany, A., and Volter, J. Hydrocarbon Adsorption and Coke Formation on Pt/Al₂O₃ and Pt-Sn/Al₂O₃ Catalysts. Appl. Catal. 30 (1987) : 69-80.
- Lieske, H., and Volter, J. State of Tin in Pt-Sn/Al₂O₃ Reforming Catalysts Investigated by TPR and Chemisorption. J. Catal. 90 (1984) : 96-105.
- Liu, K., Fung, S.C., Ho, T.C., and Rumschitzki, D.S. Identification of Coke Precursors in Heptane Reforming with a Multioutlet Fixed-Bed Reactor and a Novel Vibrational Microbalance. J. Catal. 169 (1997) : 455-468.
- Liwu, L., Tao, Z., Jingling, Z., and Zhusheng, X. Dynamic Process of Carbon Deposition Pt and Pt-Sn Catalysts for Alkane Dehydrogenation. Appl Catal. 67 (1990) : 11-20.

- Li, X.Y., Kenneth, K.J., and Burtron, D.H. Alloy Formation in Supported Pt-Sn Catalysts : Mossbauer Studies J. Catal. 128 (1991) : 1-12.
- Magnoux, P., Roger, P., Canaff, C., Fouche, V., Gnep, N.S., Guisnet, M. New Technique for the Characterization of Carbonaceous Compounds Responsible for Zeolite Deactivation. Stud. Surf. Sci. Catal. 34 (1987) : 317-330.
- Mikael Larsson. Methods of studying coke formation. Ph.D. 's Thesis, Chalmers University of Technology, 1995.
- Mross, W.D. Alkali Doping in Heterogeneous Catalysis. Catal. Rev. -Sci. Eng. 25 (1983) : 591-637.
- Oudar, J., and Wise, H. Deactivation and Poisoning of Catalysts. New York : Marcel Dekker, Inc., 1985.
- Opart Charuratana Propane Dehydrogenation over Platinum Catalyst : Decoking Performance Master's Thesis, Chulalongkorn University, 1996.
- Parera, J.M., Figoli, N.S., Traffano, E.M., Beltramini, J.N., and Martinelli, E.E. The Influence of Coke Deposition on the Functions of a Pt/Al₂O₃-Cl Bifunctional Catalyst. Appl. Catal. 5 (1983) : 33-41.
- Parera, J.M., Figoli, N.S., and Traffano, E.M. Catalytic Action of Platinum on Coke Burning. J. Catal. 79 (1983) : 481-484.
- Passos, F.B., and Schmal, M. Effect of Lithium and Residual Nitrate Species on Platinum Dispersion in Pt/Al₂O₃ Catalysts. Cat. Lett. 14 (1992) : 57-64.
- Pieck, C.L., Jablonski, E.L., Parera J.M., Frety, R., and Lefebvre, F. Characterization of Residual Coke during Burning. Ind. Eng. Chem. Res. 31 (1992) : 1017-1021.

- Pieck, C.L., Jablonski, E.L., Verderone, R.J., and Parera, J.M. Selective Regeneration of Catalytic Functions of Pt-Re-S/Al₂O₃-Cl During Coke Burning. Appl. Catal. 56 (1989) : 1-8.
- Royo, C., Ibarra, J.V., Monzon, A., and Santamaria, J. Regeneration of Coked Catalysts : The Effect of Aging upon the Characteristics of the Coke Deposits. Ind. Eng. Chem. Res. 33 (1994) : 2563-2570.
- Resasco, D.E., and Haller, G.L. Catalytic dehydrogenation of lower alkanes. Royal Society of Catalysis. 11 (1994) : 1-32.
- Resasco, D.E., Marcus, B.K., Huang, C.S., and Durante, V.A. Isobutane Dehydrogenation over Sulfided Nickel Catalysts. J. Catal. 146 (1994) : 40-55.
- Thomas, C.L. Catalytic Processes and proven catalysts. Arizona : Academic Press, Inc., 1970.
- Satterfield, C.N. Heterogeneous Catalysis in Industrial Practice 2nd ed. New York : McGraw-Hill, Inc., 1991.
- Trimm, D.L. Catalyst Design for Reduced Coking (Review). App. Catal. 5 (1983) : 263-290.
- Walker, P.L., Rusinko, J., Jr., and Austin, L.J. Adv. Catal. (1959) : 133.
- Weisz, P.B., and Goodwin, R.D. J. Catal. 6 (1966) : 425, 227.
- Yarusov, I.B., Zatulokina, E.V., Shitova, N.V., Belyi, A.S., and Ostrovskii N.M. Propane Dehydrogenation over Pt-Sn Catalysts. Catalysis Today 13 (1992) : 655-658.

CURRICULUM VITAE

Name : Mr. Pisarn Teerasukaporn
Birth Date : August 18th, 1975
Nationality : Thai
University Education :
1992-1996 Bachelor's Degree of Engineering in
Chemical Engineering
Kasetsart University