REFERENCES

Afonso, J.C. *et al.* (1997). Regeneration of a Pt-Sn/Al_2O_3 catalyst: Influence of heating rate, temperature and time of regeneration. Fuel processing technology., 50(1), 35-48.

Afonso, J.C. *et al.* (1995). Important of pretreatment on regeneration of a Pt-Sn/Al_2O_3 catalyst. Fuel processing technology., 42(1), 3-17.

Alvarez, W.E. and Resasco, D.E. (1996). Methylcycloepentane ring opening as a reaction test for Pt catalysts supported on non-acidic materials. Journal of catalysis, 164.

Bernard, J.R. (1980). in "Proc, 5th Internat. Zeolite Confer.", (L.V.C Ress, Editor) Heyden, London p.686.

Bernard J. R. and Breysse M. (1985). US Patent No. 4 493 901

Burbidge B. W. and Rees D. M. (1980). US Patent No. 4 192 771.

Chanajaranwit, B. *et al.* (2002). n-Octane aromatization on platinum over various supports prepared by vapor phase impregnation method. M.S. Thesis in Petrochemical Technology, The Petroleum and Petrochemical College, Chulalongkorn University.

Crowson R. R., Hargrove J. D. and Pout C. R. (1976). US Patent No. 3 986 982 Ehwald, H., Leibnitz, U., and Lieske, H. (2000). On deactivation of CrOx/La2O3/ZrO2 catalyst during n-octane dehydrocyclistion. I. Investigation of dehydrogenation capability by the homomolecular H-D exchange of molecular hydrogen. Catalysis Letters., 70, 23-26

Davis. B. H. and Venuto, P. B. (1969). Paraffin dehydrocyclization distribution of aromatic products obtained with "nonacidic" supported Pt catalysts. Journal of catalysis, 15, 363-372.

Ehwald, H., Leibnitz, U., and Lieske, H. (2000). On deactivation of CrOx/La2O3/ZrO2 catalyst during n-octane dehydrocyclistion. I. Investigation of dehydrogenation capability by the homomolecular H-D exchange of molecular hydrogen. Catalysis Letters., 70, 23-26

Fang, X., Li, F., Zhou, Q., and Luo, L. (1996). A study of platinum-thunium/KL zeolite reforming catalysts. Applied Catalysis A., 146,297-304.

Fang, X., Li, F., Zhou, Q., and Luo, L. (1997). Effects of heavy rare earth addition on properties of KL zeolite-supported platinum reforming catalyst. Applied Catalysis A, 161, 227-234.

Fung, S.C. (1992). US Patent No. 5 106 798.

Fung, S.C., Tauster S. J. , and Koo Jay Y.(1998). US Patent No. 5 726 112.

Huang, C-S, Sparks, D.E., Dabbagh, H.A., and Davis, B.H. (1992). Journal of catalysis, 134, 269.

Jacobs, G., Alavaraz, W.E., and Resasco, D.E. (1999). Study of preparation parameters on powder and pelletized Pt/KL catalysts for n-hexane aromatization.

Jacobs, G., Padro, C.L., and Resasco, D.E. (1998). Comparative study of n-hexane aromatization on Pt/KL, Pt/Mg(Al)O, and Pt/SiO_2 catalysts: clean and sulfur-containing feeds. Journal of catalysis, 179, 43-55

Jongpatiwut, S. *et al.* (2003). n-Octane aromatization on a Pt/KL catalyst prepared by vapor-phase impregnation. Journal of catalysis, in press.

Lane, G. S., Miller, J. T., Modica, F. S., and Barr, M.K. (1993). Infrared spectroscopy of adsorbed carbon monoxide on platinum/nonacidic zeolite catalysts. Journal of catalysis., 141, 465-477.

Lertrojanachoosit, B. *et al.* (1998). n-Hexane aromatization to benzene on Pt/KL and PtCe/KL prepared by VPI method. M.S. Thesis in Petrochemical Technology, The Petroleum and Petrochemical College, Chulalongkorn University.

Meriaudeau, P. *et al.* (1994). Aromatization of *n*-octane over Pt-based catalysts: Influence of the support on the product distribution among C_8 aromatics. Journal of catalysis., 146, 579-582.

Mojet, B.L. and Koningsberger, D.C. (1996). CO-induced decomposition of small Pt particles in K-LTL zeolite. Catal. Lett., 39, 191-196.

Paal, Z. (1980) Metal-Catalyzed cyclization reactions of hydrocarbons. Advanced in Catalysis, 273.

Sackamduang, P. *et al.* (2001). The aromatization of n-hexane and n-octane on Pt/KL catalyst prepared by vapor phase impregnation method. M.S. Thesis in

Petrochemical Technology, The Petroleum and Petrochemical College, Chulalongkorn University.

Sirasanker, S., and Padalkar, S.R. (1988). Mechanism of dehydrocyclization of n-alkanes over Platinum-Alumina catalysis. Applied Catalysis, 39, 123-126.

Stakheev, A. Y., Shpiro, E. S., Jaeger, N. I., and Schulz-Ekloff, G. (1995). Electronic state and location of Pt metal clusters in KL zeolite: FTIR study of CO chemisorption. Catal. Lett., 32, 147-158.

Sugimoto M. *et al.* (1993). Applied Catalysis A, 95, 257-268

Vaarkamp, M. *et al.* (1992). Sulfur poisoning of a Pt/BaK-LTL catalyst: A catalytic and structural study using hydrogen chemisorption and x-ray absorption spectroscopy. Journal of Catalysis., 138, 675-685.

Zheng, J. *et al.* (1996). The function of zeolite on Pt autoreduction and dispersion in Pt/L and Pt/β catalysts. Catalysis Letters, 37, 25-28.

Zheng, J. *et al.* (1998). CVD modified KL zeolite supported Pt for n-hexane aromatization. Journal of Molecular Catalysis A, 130, 271-277.

APPENDICES

Appendix A Structure of Zeolite

1. LTL Zeolite

Linde Type L: $K_6Na_3[Al_9Si_{27}O_{72}] \cdot 21\ H_2O$

Channels: [001] **12** 7.1*

Materials with the same topology:

Gallosilicate L(2,3)

(K,Ba)-G,L(4)

LZ-212(5)

Perlialite(6,7)

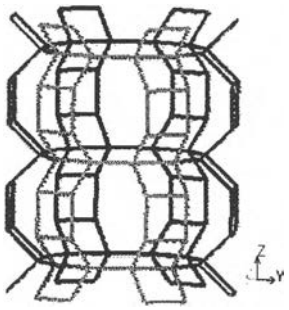

Figure A1 Structure of LTL zeolite.
(viewed normal to [001])

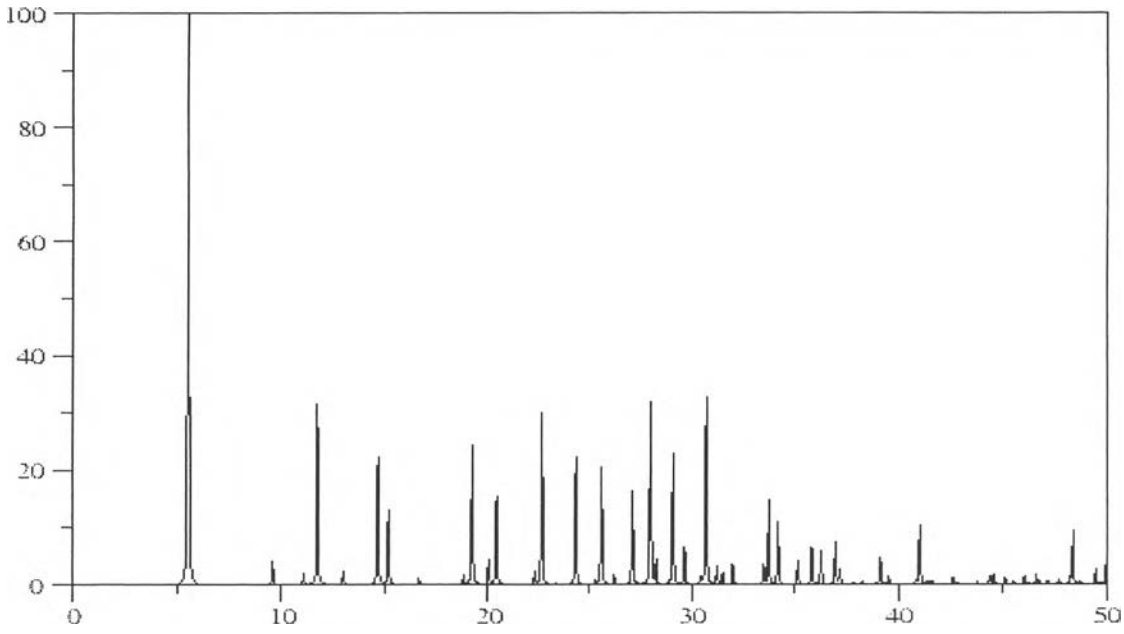

Figure A2. Referable XRD pattern for LTL zeolite, x-axis is 2θ, y-axis is intensity..
(http://www.izastructure.org/databases/)

Appendix B TPO profile of regenerated Pt/KL after regeneration in air

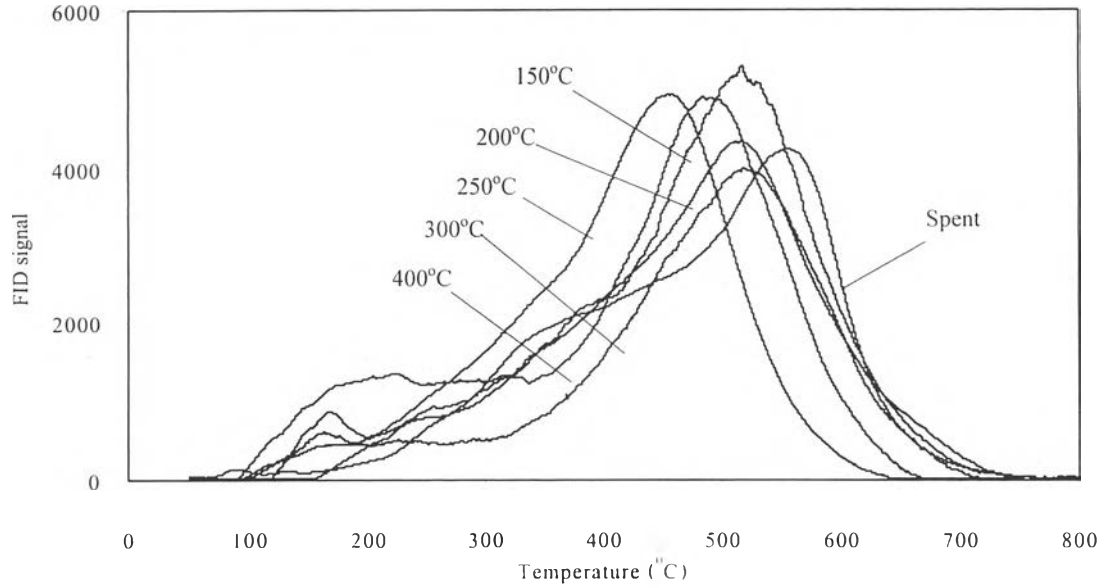

Figure B1 TPO profile of regenerated Pt/KL with regeneration conditions: 150-400°C, 0.5 h, air flow rate = 100 ml/min/g.

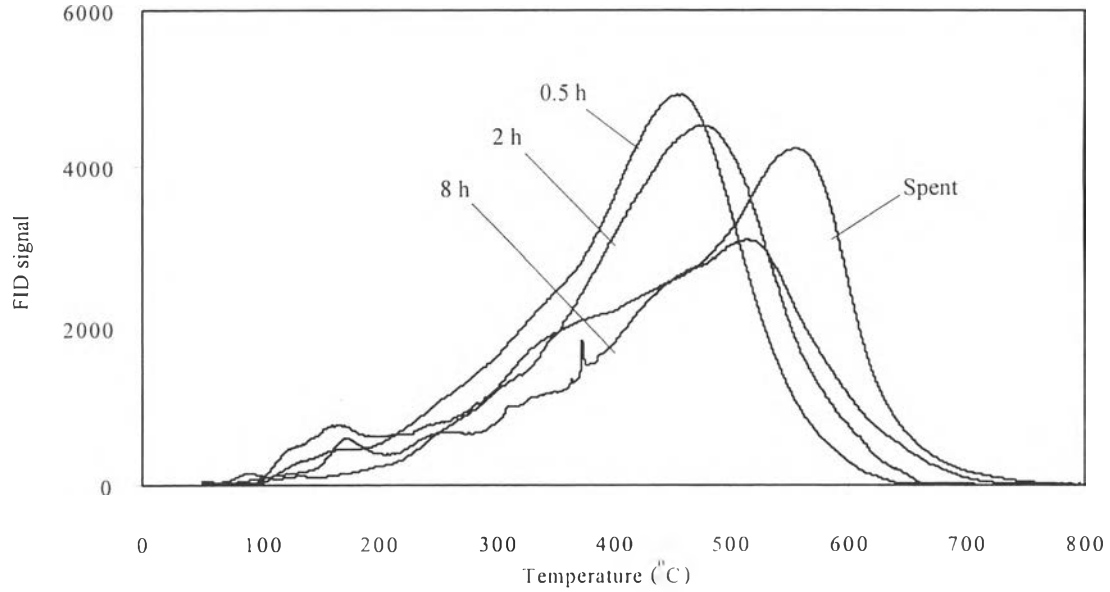

Figure B2 TPO profile of regenerated Pt/KL with regeneration conditions: 250°C, 0.5-8 h, air flow rate = 100 ml/min/g.

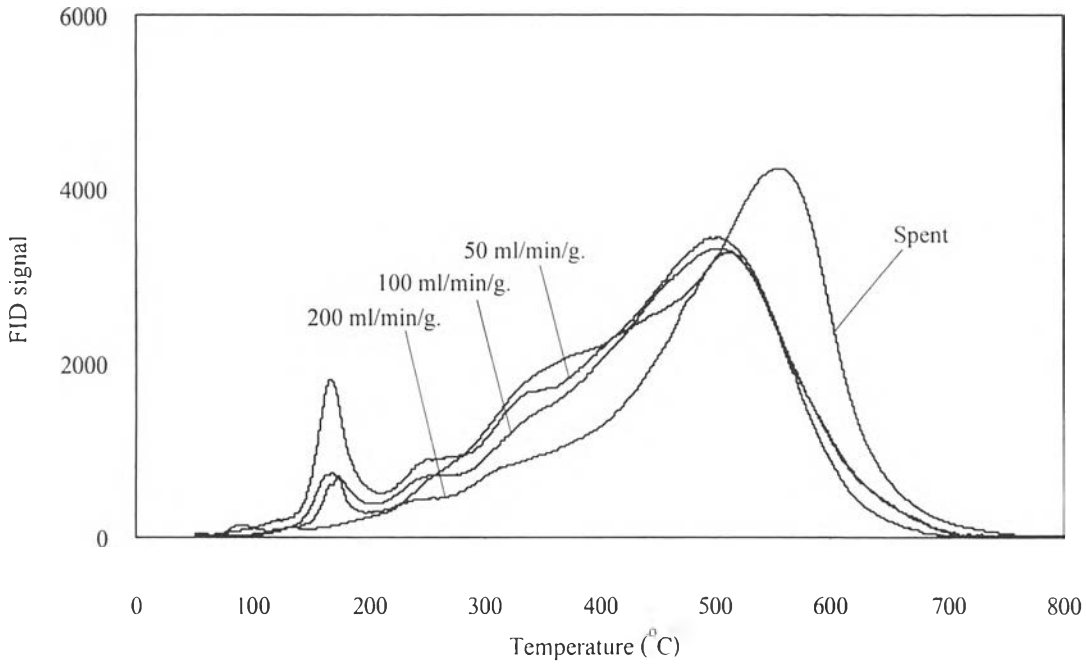

Figure B3 TPO profile of regenerated Pt/KL with regeneration conditions: 250°C, 0.5 h, air flow rate = 50-200 ml/min/g.

Appendix C Standard deviation (SD)

Table C1 Standard deviation (SD) of the catalytic activity after 7 reaction-regeneration cycles

SD	Conversion	Aromatics selectvity	C8aromatics yield	EB/OX ratio	B/C8aromatics ratio
Effect of regeneration temperature					
150	0.21	0.02	0.04	0.10	2.12
200	0.22	0.03	0.02	0.27	2.08
250	0.28	0.03	0.03	0.28	2.06
300	0.16	0.02	0.01	0.20	5.79
400	0.20	0.04	0.02	0.23	1.60
Effect of regeneration time					
0.5	0.28	0.03	0.03	0.28	2.06
2	0.25	0.04	0.02	0.35	1.63
8	0.19	0.04	0.01	0.43	2.01
Effect of air floe rate					
50	0.28	0.27	0.01	0.16	6.71
100	0.28	0.03	0.03	0.28	2.06
200	0.26	0.23	0.01	0.32	5.39

CURRICULUM VITAE

Name: Ms. Dholporn Lertkijcharoenwong

Date of Birth: October 15, 1979

Nationality: Thai

University Education:

1997-2000 B.Sc. in Chemical Engineering, Faculty of Science, Chulalongkorn University, Bangkok, Thailand