REFERENCES

http://www.en.wikipedia.org/wiki/Ethylene_oxide.

http://www.en.wikipedia.org/wiki/Plasma.

http://www.prlog.org.

Bhasin, M.M. (1988). Catalyst composition for oxidation of ethylene to ethylene oxide. US Patent 4,908,343.

Campbell, C.T., and Paffett, M.T. (1984). The role of chlorine promoters in catalytic ethylene epoxidation over the Ag(110) surface. Applied Surface Science, 19(1), 28-42.

Campbell, C.T., and Koel, B.E. (1985). Chlorine promotion of selective ethylene oxidation over Ag(110): Kinetics and mechanism. Journal of Catalysis, 92(2), 272-283.

Campbell, C.T. (1986). Chlorine promoters in selective ethylene epoxidation over Ag(111): A comparison with Ag(110), Journal of Catalysis, 99(1), 28-38.

Cullity, B.D. (1956). Elements of X-Ray Diffraction. Reading, Mass.: Addison-Wesley Pub. Co.

Eliasson, B., Hirth, M., and Kogeischatz, U. (1987). Ozone synthesis from oxygen in dielectric barrier discharge. Journal of Applied Physics, 20, 1421-1437.

Eliasson, B., and Kogelschatz, U. (1991). Nonequilibrium volume plasma chemical processing. IEEE Transactions on Plasma Science, 19(6), 1063-1077.

Epling, W.S., Hoflund, G.B., and Minahan, D.M. (1997). Study of Cs-promoted, α-alumina-supported silver, ethylene-epoxidation catalysts. Journal of Catalysis, 171(2), 490-497.

Fridman, A., and A. Kennedy L. (1998). Plasma Physics and Engineering. New York: Taylor & Francis, P.10

Geenen, P.V., Boss, H.J., and Pott, G.T. (1982). A study the vapor-phase epoxidation of propylene and ethylene on silver and silver-gold alloy catalysts. Journal of Catalysis, 77, 499-510.

Goncharova, S.N., Paukshtis, E.A., and Bal'zhinimaev, B.S. (1995). Size effects in ethylene oxidation on silver catalysts: influence of support

and Cs promoter. Applied Catalysis A: General, 126, 67-84.

Heintze, M., and Pietruszka, B. (2004). Plasma catalytic conversion of methane into syngas: the combined effect of discharge activation and catalysis. Catalysis Today, 87, 21-25.

Holgado, M.J., Inigo, A.C., and Rives, V. (1998). Effect of preparation conditions on the properties of highly reduced Rh/TiO_2 (anatase and rutile) catalysts. Applied Catalysis A: General, 175(1-2), 33-41.

Horvath, M. (1980), The Netherlands, Ozone, Elsevier Science.

Iwakura, G. (1985). A Novel Silver Catalyst Prepared by Using Superheated-Steam as a Heating Medium for Ethylene Oxide Production. Japan Patent 63-126552.

Jankowiak, J.T., Barteau, M.A. (2005). Ethylene epoxidation over silver and copper-silver bimetallic catalysts: I. Kinetics and selectivity. Journal of Catalysis, 236(1), 366-378.

Jankowiak, J.T., and Barteau, M.A. (2005). Ethylene epoxidation over silver and copper-silver bimetallic catalysts: II. Cs and Cl promotion. Journal of Catalysis, 236(1), 379-386.

Jeong, J.Y., Park, J., Henins, I., Babayan, S.E., V.J., Tu, Selwyn, G.S., Ding, G., and Hicks, R.F. (2000). Reaction chemistry in the afterglow of an oxygen-helium, atmospheric-pressure plasma. Journal of Physical Chemistry A, 104(34), 8072-8032.

Kilty, P.A., Rol, N.C., and Sachtler, W.M.H. (1973). The activity and selectivity of oxygen atoms adsorbed on a $Ag/\alpha\text{-}Al_2O_3$ catalyst in ethene epoxidation. Catalysis Letters, 99(1-2), 45-53.

Kondaries, D.I., and Verykios, X.E. (1996). Interaction of oxygen with supported Ag-Au alloy catalysts. Journal of Catalysis, 158, 363-377.

Kraus, M., Ph.D. Thesis, Swiss Federal Institute of Technology, Zurich, 2001.

Kruapong, A. (2000). Partial Oxidation of Methane to Synthesis Gas in Low Temperature Plasmas. M.S. Thesis, Chulalongkorn University, Bangkok.

Law, G.H., and Chitwood, H.C. (1942). Catalyst Composition for Oxidation of Ethylene to Ethylene Oxide. US Patent 2,279,470.

Liu, Ch., Marafee, A., Mallinson, R.G., and Lobban, L. (1997). Methane conversion to higher hydrocarbons in a corona discharge over metal oxide catalysts with OH groups. Applied Catalysis A: General, 164(1-2), 21-33.

Malik, M.A. and Malik, S.A. (1999). Catalyst enhanced oxidation of VOCs and methane in cold-plasma reactors. Platinum Metal Review, 43(3), 109-113.

Mao, C.F., and Vannice, M.A. (1995). High surface area a-aluminas: III. Oxidation of ethylene, ethylene oxide, and acetaldehyde over silver dispersed on high surface area α-alumina. Applied Catalysis A: General, 122, 61-76.

Matar, S., Mirbach, M. J., and Tayim, H. A. (1989). Catalysis in Petrochemical Processes, Kluwer Academic Publishers, Dordrecht: The Netherlands, P. 85.

Nasser, E. (1971). Fundamentals of Gaseous Ionization and Plasma Electronics, USA: John Wiley & Sons, Inc.

Patiño, P., Hernández, F.E., Rondón, S. (1995). Reactions of $O(^3P)$ with secondary C-H bonds of saturated hydrocarbons in nonequilibrium plasmas.Plasma Chemistry and Plasma Processing, 15(2), 159-171.

Patiño, P., Ropero, M., and Iacocca D. (1996). Reactions of $O(^3P)$ with aromatic compounds in liquid phase. Plasma Chemistry and Plasma Processing, 16(4), 563-575.

Patiño, P., Sánchez, N., Suhr, H., Hernández, N. (1999). Reactions of nonequilibrium oxygen plasmas with liquid olefins. Plasma Chemistry and Plasma Processing, 19(2), 241-254.

Pietruszka B, and Heintze M. (2004). Methane conversion at low temperature: the combined application of catalysis and non-equilibrium plasma. Catalysis Today, 90, 151-8.

Permsin, N. (2009) Ethylene Epoxidation in Low-Temperature Dielectric Barrier Discharge System: Effect of Electrode Geometry. M.S. Thesis, Chulalongkorn University, Bangkok.

Rojluechai, S., Chavadej, S., Schwank, J.W., and Meeyoo, V. (2006). Activity of ethylene epoxidation over high surface area alumina support Au-Ag catalysts. Journal Chemical Engineering of Japan, 39(3), 321-326.

Rosacha, L.A., Anderson, G.K., Bechtold, L.A., Coogan, J.J., Heck, H.G., Kang, M., McCulla, W.H., Tennant, R.A., and Wantuck, P.J. (1993). Treatment of hazardous organic wastes using silent discharge Plasmas. Non-Thermal Plasma Technique for Pollution Control, NATO ASI series, 34, part B, 128-139.

Saktrakool, K. (2003). Oxidative Removal of Ethylene in a Multistage Plasma Reactor in the Presence of TiO_2. M.S. Thesis, Chulalongkorn University, Bangkok.

Satterfield, C. N. (1991). Heterogeneous Catalysis in Industrial Practice. New York: McGraw-Hill.

Sreethawong, T., Suwannabart, T., and Chavadej, S. (2008). Ethylene epoxidation in a low-temperature dielectric barrier discharge system. Plasma Chemistry and Plasma Processing, 28,629-624

Seyedmonir, S.R., Plischke, J.K., Vannice, M.A., and Young, H.W. (1990) Ethylene oxidation over small silver crystallites. Journal of Catalysis, 123(2), 534-549.

Suga, Y., and Sekiguchi, H. (2005). Epoxidation of carbon double bond using atmospheric non-equilibrium oxygen plasma. Thin Solid Films, 506-507, 427-431.

Suhr, H. (1983). Application of nonequilibrium plasmas in organic chemistry. Plasma Chemistry and Plasma Processing, 3(1), 1-61.

Suhr, H., Schmid, H., Pfeundschuh, H., and Lacocca, D. (1984). Plasma oxidation of liquids. Plasma Chemistry and Plasma Processing, 4(4), 285-295.

Suhr, H. and Pfreundschuh, H. (1988). Reactions of nonequilibrium oxygen plasmas with liquid olefins. Plasma Chemistry and Plasma Processing, 8(1), 67-74.

Sutthiruangwong, S. (1999). Plasma Catalytic Production of Methanol. M.S. Thesis, Chulalongkorn University, Bangkok.

Suttikul, T., Sreethawong, T., Segiguchi, H. and Chavadej, S. (2011). Ethylene epoxidation over alumina-and silica-supported silver catalysts in low-temperature AC dielectric barrier discharge. Plasma Chemistry and Plasma Processing, 31, 273-290

Tansuwan, A. (2007). Epoxidation of Ethylene over Silver Catalysts in Low-Temperature Corona Discharge. M.S. Thesis, Chulalongkorn University, Bangkok.

Tan, S.A., Grant, R.B., and Lambert, R.M. (1986). Chlorine-oxygen interactions and the role of chlorine in ethylene oxidation over Ag(111). Journal of Catalysis, 100(2), 383-391.

Tezuka, M., and Yajima, T. (1996). Oxidation of aromatic hydrocarbons with oxygen in a radiofrequency plasma. Plasma Chemistry and Plasma Processing, 16(3), 329-340.

Tories, N., and Verikios, X.E. (1987). The oxidation of ethylene over silver-based alloy catalysts: 3. Silver-gold alloys. Journal of Catalysis, 108, 161-174.

Viriyasiripongkul, S. (2000). Oxidative Coupling of Methane to Higher Hydrocarbons over Zeolite in AC Electric Discharges. M.S. Thesis, Chulalongkorn University, Bangkok.

Yeung, K.L., Gavriilidis, A., Varma, A., and Bhasin, M.M. (1998). Effects of 1, 2 dichloroethane addition on the optimal silver catalyst distribution in pellets for epoxidation of ethylene. Journal of Catalysis, 174(1), 1-12.

Yong, S.Y., Kennedy, E.M., and Cant, N.W. (1991). Oxide catalysed reactions of ethylene oxide under conditions relevant to ethylene epoxidation over supported silver. Applied Catalysis, 76(1), 31-48.

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Proceedings:

1. Paosombat, B., Suttikul, T., and Chavadej, S. (2012, April 11-13) Ethylene Epoxidation in A Low-Temperature Parallel Plate Dielectric Barrier Discharge System: Effects of Ethylene Feed Position and O_2/C_2H_4 Feed Molar Ratio. Proceedings of ICCBEE 2012: International Conference on Chemical, Biological and Environmental Engineering, Venice, Italy.
2. Paosombat, B., Suttikul, T., and Chavadej, S. (2012, April 24) Ethylene Epoxidation in A Low-Temperature Parallel Plate Dielectric Barrier Discharge System: Effects of Ethylene Feed Position and Ag/SiO_2 Catalyst Existence. Proceedings of The 3nd Research Symposium on Petroleum, Petrochemicals, and Advanced Materials and The 18th PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, Thailand.