

Contents

Preface	1
FT catalyst performance: comparison between pilot-scale SBCR and CSTR systems J.K. Neathery and B.H. Davis	3
Methane conversion via photocatalytic reactions C.E. Taylor	9
Effect of pressure on the carbon deposition route in CO ₂ reforming of ¹³ CH ₄ A. Shamsi and C.D. Johnson	17
CO ₂ reforming of CH ₄ over ceria-supported metal catalysts K. Asami, X. Li, K. Fujimoto, Y. Koyama, A. Sakurama, N. Kometani and Y. Yonezawa	27
Development of a microreactor-based parallel catalyst analysis system for synthesis gas conversion X. Ouyang and R.S. Besser	33
Conversion of mixtures of methane and acetylene or ethylene into higher molecular weight hydrocarbons over metal-loaded and unloaded HZSM-5 zeolite catalysts A. Alkhalil, X. Wu and R.G. Anthony	43
Ethylene production using a Pd and Ag–Pd–Y-zeolite catalyst in a DC plasma reactor C.L. Gordon, L.L. Lobban and R.G. Mallinson	51
Direct synthesis of middle <i>iso</i> -paraffins from synthesis gas X. Li, K. Asami, M. Luo, K. Michiki, N. Tsubaki and K. Fujimoto	59
Spatial constraints and frustrated reactions in Fischer–Tropsch synthesis H. Schulz	67
Integrating low-temperature methanol synthesis and CO ₂ sequestration technologies: application to IGCC plants D. Mahajan and A.N. Goland	71
Fischer–Tropsch synthesis: relationship between iron catalyst composition and process variables B.H. Davis	83
Comments about the causes of deviations from the Anderson–Schulz–Flory distribution of the Fischer–Tropsch reaction products I. Puskas and R.S. Hurlbut	99
Previous Issues of Catalysis Today	I