

# CONTENTS OF ICCE-16 PROCEEDINGS

|   |     |
|---|-----|
| Nano materials for microelectronic and photonic packaging   |     |
| C.P. Wong, W. Lin, L. Zhu, H. Jiang, R. Zhang, Y. Li, K. Moon   | 1   |
| Structure and characterization of perfluorinated octyl silane materials   |     |
| R. Weng, L.M. Zhang, C.H. Wang and S.P. Wang  | 5   |
| Thermoplastic natural rubber based nanocomposites   |     |
| S.H. Ahmad, N.A. Hassan, R. Rasid and S.N. Surip  | 9   |
| Cadmium as an environmental pollutant study of evolution of cadmium, its effects on beans ( <i>Phaseolus vulgaris</i> ) and its interaction with zinc |     |
| H. Benabid and M.F. Ghorab  | 14  |
| Taguchi method to optimize brazing conditions for copper and ASTM A501 steel  |     |
| Y.Q. Wang, H.D. Kwon, S.T. Kim, A.M. Afsar, and J.I. Song   | 17  |
| Synthesis of the compositing CdS nanorods and nanoparticles   |     |
| G.L. Tan and X.F. Yu  | 20  |
| Degradation mechanism of the balsa wood core composite sandwich beam from heating from one side   |     |
| David Hui and P.K. Dutta  | 26  |
| High-strain-rate fracture toughness of delamination in polymer composite interphase   |     |
| D. Hui and P.K. Dutta   | 34  |
| Comparison of fatigue behavior of concrete and FRP composite bridge decks   |     |
| D. Hui and P.K. Dutta   | 49  |
| Fabrication and characterization of hot embossed polymer microfluidic chips for ESI-MS  |     |
| S. Malahat, P.G. Iovenitti and I. Sbarski   | 57  |
| Optimization of brazing parameters for copper and ASTM A501 steel using Taguchi method  |     |
| Y.Q. Wang, F.A. Mirza, A.M. Afsar and J. I. Song  | 64  |
| Elastic solution of stresses and strains in an FGM rectangular plate by finite difference method  |     |
| A.M. Afsar, R. Rahman, F. A. Mirza and J.I. Song  | 70  |
| Low velocity impact investigation of aluminum honeycomb sandwich panels   |     |
| Y. Shi, Y.Q. Wang, F. A. Mirza, A. M. Afsar and J. I. Song  | 77  |
| Dry and lubricant wear behaviors of Al <sub>2</sub> O <sub>3</sub> /SiCp hybrid metal matrix composites   |     |
| Y.Q. Wang, A.M. Afsar, F.A. Mirza and J.I. Song   | 84  |
| Pilot-scale experimental study on the new technology of Cao-PSZ by microwave heating  |     |
| J. H. Peng, S. H. Guo, G. Chen, L. B. Zhang, J. L. Mao and S. M. Zhang  | 91  |
| Effect of Structural Features and Temperature on Diffusion Selectivity of O <sub>2</sub> vs. N <sub>2</sub> in Ethylene-1-hexene Copolymer            |     |
| S. Z. Wu, Y. G. Wang, J. Yi, J. E. Mark and L. Q. Zhang   | 97  |
| Spatial Variability of Expansive Soil Properties at Different Scales Within Kibaha, Tanzania.   |     |
| Charles Lucian  | 100 |
| Thermoplastic natural rubber based nanocomposites   |     |
| H. J. Sahrim Ahmad, N. A. Hassan, R. Rasid and S. N. Surip  | 107 |
| Effects of fiber orientations on dry and lubricant wear behaviors   |     |
| Y. Q. Wang, A. M. Afsar, and J. I. Song   | 112 |
| The structure and characterization of perfluorinated octyl silane materials   |     |
| R. Weng, L. M. Zhang, C. H. Wang and S. P. Wang   | 115 |