Review articles
Dual-phase evolution in complex adaptive systems 609
G. Paperin, D. G. Green & S. Sadedin

Research articles
Bioadhesion of various proteins on random, diblock and triblock copolymer surfaces and the effect of pH conditions 630
M. L. B. Palacio, S. R. Schricker & B. Bhushan

Substrate-induced phenotypic switches of human smooth muscle cells: an in vitro study of in-stent restenosis activation pathways 641
A. L. Godford, H. J. S. Stewart, C. Morris & M. Santin

Retrieval of phytoplankton size from bio-optical measurements: theory and applications 650
S. Roy, S. Sathyendranath & T. Platt

Targeting vaccination against novel infections: risk, age and spatial structure for pandemic influenza in Great Britain 661
M. J. Keeling & P. J. White

Comparison of a poly-l-lactide-co-ε-ε-caprolactone and human amniotic membrane for urothelium tissue engineering applications 671

The pathway to intelligent implants: osteoblast response to nano silicon-doped hydroxyapatite patterning 678
G. Mavry, G. Koller, L. Di Silvio, M. Edrisingerhe, W. Bunfield & J. Huang

Blast-related fracture patterns: a forensic biomechanical approach 689

Role of two-way airflow owing to temperature difference in severe acute respiratory syndrome transmission: reviving the largest nosocomial severe acute respiratory syndrome outbreak in Hong Kong 699
C. Chen, B. Zhao, X. Yang & Y. Li

Diminished organelle motion in murine Kupffer cells during the erythrocytic stage of malaria 711
C. F. Bellows, R. M. Molina & J. D. Brain

The statistical mechanics of a polygenic character under stabilizing selection, mutation and drift 720
H. P. de Vladar & N. H. Barton

Adaptations for economical bipedal running: the effect of limb structure on three-dimensional joint mechanics 740

Reports
Herald waves of cholera in nineteenth century London 756
J. H. Tien, H. N. Poinar, D. N. Fisman & D. J. D. Earn