Review articles
Fluorescence-based transient state monitoring for biomolecular spectroscopy and imaging 1135
J. Widengren

Research articles
Scaling and mechanics of carnivoran footpads reveal the principles of footpad design 1145
K.-p. Cift & V. L. Roth
Simulation of lung alveolar epithelial wound healing in vitro 1157
S. H. J. Kim, M. A. Matthay, K. Mostov & C. A. Hunt
Development of magnesium calcium phosphate biocement for bone regeneration 1171
Analytical methods for quantifying environmental connectivity for the control and surveillance of infectious disease spread 1181
J. Remais, A. Akullian, L. Ding & E. Seto
Cerebrospinal fluid dynamics in the human cranial subarachnoid space: an overlooked mediator of cerebral disease. I. Computational model 1195
S. Gupta, M. Soellinger, D. M. Grzybowski, P. Boesiger, J. Biddiscombe, D. Poulikakos & V. Kurtcuoglu
Cerebrospinal fluid dynamics in the human cranial subarachnoid space: an overlooked mediator of cerebral disease. II. In vitro arachnoid outflow model 1205
D. W. Holman, V. Kurtcuoglu & D. M. Grzybowski
Stochasticity in staged models of epidemics: quantifying the dynamics of whooping cough 1219
A. J. Black & A. J. McKane
Characterization and analysis of carbon fibre-reinforced polymer composite laminates with embedded circular vasculature 1229
C.-Y. Huang, R. S. Trask & J. P. Bond

Reports
Corrections to the theory and the optimal line in the swimming diagram of Taylor (1952) 1243
J. A. C. Humphrey, J. Chen, T. Iwasaki & W. O. Friesen