Review articles
Fibrin gels and their clinical and bioengineering applications 1
P. A. Janmey, J. P. Winer & J. W. Weisel

Research articles
Tuberculosis reinfection rate as a proportion of total infection rate correlates with the logarithm of the incidence rate: a mathematical model 11
P. W. Uys, P. D. van Helden & J. W. Hargrove
Light alters nociceptive effects of magnetic field shielding in mice: intensity and wavelength considerations 17
I. S. Prato, D. Despardos-Holmes, L. D. Kerenski, J. C. McKay, J. A. Robertson & A. W. Thomas
Dynamic mechanical oscillations during metamorphosis of the monarch butterfly 29
A. E. Pelling, P. R. Wilkinson, R. Stringer & J. K. Gimzewski
Modelling the time-dependent transmission rate for porcine circovirus type 2 (PCV2) in pigs using data from serial transmission experiments 39
M. Andraud, B. Grasland, B. Durand, R. Cariquet, A. Jestin, F. Madec, J. S. Pierre & N. Rose
Control of translation initiation: a model-based analysis from limited experimental data 51
R. J. Dimelow & S. J. Wilkinson
Systematic construction and prediction of the arrangement of the strands of sandwich proteins 63
T. S. Papatheodorou & A. S. Fokas
Odour character differences for enantiomers correlate with molecular flexibility 75
J. C. Brookes, A. P. Hornfield & A. M. Stoneham
Does a 'turbophoretic' effect account for layer concentrations of insects migrating in the stable night-time atmosphere? 87
A. M. Reynolds, D. R. Reynolds & J. R. Riley
The influence of mesoscale porosity on cortical bone anisotropy. Investigations via asymptotic homogenization 97
W. J. Farnell & Q. Geim
Anomalous diffusion of heterogeneous populations characterized by normal diffusion at the individual level 111
S. Hapca, J. W. Crawford & I. M. Young

Reports
Rare peptide segments are found significantly more often in proto-oncoproteins than control proteins: implications for immunology and oncology 123
B. Trost, D. Kanduc & A. Kusalik