

CONTENTS

BIOPHYSICAL JOURNAL

April 1985 volume 47 number 4

- 451 LASER RAMAN SPECTRA OF CALF THYMUS CHROMATIN AND ITS CONSTITUENTS. *R. Savoie, J.-J. Jutier, S. Alex, P. Nadeau, and P. N. Lewis*
- 461 LASER FLOW MEASUREMENTS OF SCATTERING AND FLUORESCENCE FROM CELL NUCLEI IN THE PRESENCE OF INCREASING Mg^{++} CONCENTRATIONS. *M. Grattarola, P. Carlo, G. Giannetti, R. Finollo, R. Viviani, and A. Chiabrera*
- 469 KINETIC ANALYSIS OF CHANNEL GATING. APPLICATION TO THE CHOLINERGIC RECEPTOR CHANNEL AND THE CHLORIDE CHANNEL FROM *TORPEDO CALIFORNICA*. *P. Labarca, J. A. Rice, D. R. Fredkin, and M. Montal*
- 479 NEGATIVE GEOTACTIC BEHAVIOR OF *PARAMECIUM CAUDATUM* IS COMPLETELY DESCRIBED BY THE MECHANISM OF BUOYANCY-ORIENTED UPWARD SWIMMING. *Keiji Fukui and Hiroshi Asai*
- 483 DYNAMIC MORPHOLOGY OF CALCIUM-INDUCED INTERACTIONS BETWEEN PHOSPHATIDYLSERINE VESICLES. *R. P. Rand, B. Kachar, and T. S. Reese*
- 491 INTRACELLULAR GAS SUPERSATURATION TOLERANCES OF ERYTHROCYTES AND RESEALED GHOSTS. *Barbara B. Hemmingsen, Nisan A. Steinberg, and Edvard A. Hemmingsen*
- 497 LARGE SCALE GLOBAL STRUCTURAL CHANGES OF THE PURPLE MEMBRANE DURING THE PHOTOCYCLE. *James E. Draheim and Joseph Y. Cassim*
- 509 *TRANS/13-CIS* ISOMERIZATION IS ESSENTIAL FOR BOTH THE PHOTOCYCLE AND PROTON PUMPING OF BACTERIORHODOPSIN. *C. H. Chang, Rajni Govindjee, Thomas Ebrey, Kimberly A. Bagley, Gavin Dollinger, Laura Eisenstein, Jeffery Marque, Heinrich Roder, J. Vittitow, Jim-Min Fang, and Koji Nakanishi*
- 513 ALIGNMENT OF MICROSCOPIC PARTICLES IN ELECTRIC FIELDS AND ITS BIOLOGICAL IMPLICATIONS. *S. Takashima and H. P. Schwan*
- 519 MOVEMENT OF A FLUORESCENT LIPID LABEL FROM A LABELED ERYTHROCYTE MEMBRANE TO AN UNLABELED ERYTHROCYTE MEMBRANE FOLLOWING ELECTRIC-FIELD-INDUCED FUSION. *Arthur E. Sowers*
- 527 NATURALLY CRYSTALLINE HEMOGLOBIN OF THE NEMATODE *MERMIS NIGRESCENS*. AN IN SITU MICROSPECTROPHOTOMETRIC STUDY OF CHEMICAL PROPERTIES AND DICHROISM. *A. H. Burr and F. I. Harosi*
- 537 RESONANCE RAMAN SPECTRA OF PHOTODISSOCIATED HEMOGLOBINS. IMPLICATIONS ON COOPERATIVE MECHANISMS. *D. L. Rousseau and M. R. Ondrias*
- 547 A PHOTOGRAMMETRIC METHOD TO MEASURE FLUID MOVEMENT ACROSS ISOLATED FROG RETINAL PIGMENT EPITHELIUM. *Donald A. Frambach, John J. Weiter, and Alice J. Adler*
- 553 MEASUREMENT OF A WIDE RANGE OF INTRACELLULAR SODIUM CONCENTRATIONS IN ERYTHROCYTES BY ^{23}Na NUCLEAR MAGNETIC RESONANCE. *Yvan Boulanger, Patrick Vinay, and Michel Desroches*
- Brief Communications*
- 563 CALCULATION OF THE ELECTROPHORETIC MOBILITY OF A PARTICLE BEARING BOUND POLYELECTROLYTE USING THE NONLINEAR POISSON-BOLTZMANN EQUATION. *Kim A. Sharp and Donald E. Brooks*
- 567 VOLTAGE-DEPENDENT REMOVAL OF SODIUM INACTIVATION BY *N*-BROMOACETAMIDE AND PRO-NASE. *Vincent L. Salgado, Jay Z. Yeh, and Toshio Narahashi*
- 573 CONDUCTANCE AND SELECTIVITY PROPERTIES OF A SUBSTATE OF THE RABBIT SARCOPLASMIC RETICULUM CHANNEL. *James A. Fox*