DEPARTMENTS

PUBLICATIONS


PRESENTATIONS

Adrian, F. J., “Chemically Induced Magnetic Polarization in Free Radical Reactions,” Special International Symp. on Free Radical Chemistry, Lanzhou, Peoples Republic of China (Sep 6-10, 1985).


Hirsh, R. S., “Vortex Motion in a Stratified Medium—Numerical Computation and Comparison with Experiments,” University of Uppsala (Nov 1, 1985) and Royal Institute of Technology, Stockholm (Nov 3, 1985).


Krimigis, S. M., “Results of the AMPTE Program,” Space Plasma Physics Group, Democritos University of Thrace, Xanthi, Greece (Jun 22, 1985).


Johns Hopkins APL Technical Digest, Volume 7, Number 1 (1986)


Schafer, J. (Max Planck Inst., Munich) and Monchick, L. (APL), “Pressure Broadening Line Shape Cross Sections of HD Colliding with H₂ and He,” Conf. on the Dynamics of Molecular Collisions, Snowbird, Utah (Jul 18, 1985).


The following papers were presented at the Fall Meeting, American Geophysical Union, San Francisco (Dec 9-13, 1985):


COLOQUIA


Dec 13—"Why Nuclear Deterrence Will Not Go Away," M. Nacht, University of Maryland.


Jan 10—"An Industrial Laboratory," R. A. Frosch, General Motors Research Laboratories.

Jan 17—"Mapping the Chromosomes of Man," V. A. McKusick, The Johns Hopkins University.


Jan 31—"Bioelectromagnetic Investigations at APL," J. S. Hansen, APL.

Feb 7—"Chaotic Processes in the Solar System," J. Wisdom, MIT.


U.S. PATENTS (1985)

R. E. Fischell, *Plural Module Medication Delivery System*, # 4,494,950, Jan 22:

A system allowing intercommunication between a plurality of intracorporeal and/or extracorporeal modules forming a biomedical system, such as a closed-loop medication infusion system.

R. E. Fischell, *Fluid Handling System for Medication Infusion System*, # 4,525,165, Jun 25:

The fluid-handling portion of a medication infusion system, directed at the combination of a pulsatile medication pump and an accumulator/flow restrictor that acts to smooth the output from the pump to better simulate the natural flow profiles of a body-produced substance such as insulin or reproductive sex hormones.


A system for inhibiting self-injurious behavior, comprising a sensor module that detects self-inflicted blows to a patient's head and transmits a coded signal to a stimulus module that responds by applying aversive electrical stimulation to the patient's skin.

A. F. Hogrefe and W. E. Radford, *Coherent Inductive Communications Link for Biomedical Applications*, # 4,561,443, Dec 11:

An improved two-way coherent communications link between an external transceiver and an internal transceiver located in a biologically implanted medical unit.

C. A. Keller, *Fiber Optic Fluid Impurity Detector*, # 4,544,840, Oct 1:

A system comprising at least one optic fiber whose index of refraction is matched to that of a surrounding fluid, so that the amount of light that traverses the light pipe varies as a function of an impurity contained in the fluid.

D. A. Kitchin, *Synchronous Clock Stopper for a Microprocessor Operated in a Power-Limited Environment*, # 4,545,030, Oct 1:

Circuitry for controlling a microprocessor in a limited power environment in order to conserve its power consumption.

J. G. Parker and W. D. Stanbro, *Localization of Cancerous Tissue by Monitoring Infrared Fluorescence Emitted by Intravenously Injected Porphyrin, Tumor-Specific Markers Excited by Long Wavelength Light*, # 4,541,438, Sep 17:

A method and apparatus for localizing cancerous tissue during phototherapy, based on the detection of fluorescent emission produced when the tissue is excited by long-wavelength red light.

R. S. Potember, T. O. Poehler, and D. O. Cowan, *Method of Fabricating a Current-Controlled Bistable Electrical Organic Thin-Film Switching Device*, # 4,507,672, Mar 26:

A method of fabricating a metal-organic thin-film solid-state semiconductor device that is useful as a current-controlled electrical threshold or memory-switching apparatus.


A system that can be either hardware- or software-implemented for processing radar data in a manner that enhances the identification of targets of interest in a clutter or noise environment.

W. Schneider and R. J. Johns, *Portable pH Data Collector*, # 4,546,436, Oct 8:

A portable data collector incorporating a data compression and mapping technique that is uniquely suited to record the episodic nature of gastroesophageal reflux behavior.

D. M. Silver and N. deHaas, *Cryogenic Tank Support System*, # 4,496,073, Jan 29:

A novel support structure for a cryogenic tank, featuring low thermal conductivity and good mechanical properties to avoid low-frequency resonant vibrations.