Section B
Chemical Waves, Fronts, and Patterns
Chemical Waves in Excitable Media
Convection Center 216

J. Pojman, Organizer, Presiding

8:10-Introductory Remarks by J. Pojman
8:20-7. Noise driven avalanche behavior in subexcitable media. K. Showalter
9:00-8. Waving in the Distance. P. Strasser, J. Christoph, M. Eiswirth
9:40-9. Wave propagation in media with nonuniform and disordered excitability. V. Pμerez-Muñuzuri, I. Sendiña-Nadal, L. Ramμirez-Piscina, J. Casademunt, D. Vives, J. M. Sancho, F. Sagues, M. Gomez-Gesteira
10:20-Intermission
10:40-10. Calcium wave pattern formation and stability in Xenopus oocytes. J. D. Lechleiter, P. Camacho, J. L. Hudson, M. Falcke
11:20-11. Universal dispersion relation of chemical waves in excitable media. J-M. Flesselles, A. Belmonte, R. Toth, V. Gaspar
11:40-12. A study of the waves in the Belousov-Zhabotinsky reaction using UV-Vis spectroscopy. J. L. F. Porteiro, L. H. Garcia-Rubio, E. Steimle

SUNDAY AFTERNOON

Section B
Chemical Waves, Fronts and Patterns
Convection and Chemical Waves

I. R. Epstein, Organizer, Presiding

1:20-24. Cooperative phenomena from convective instabilities. R. H. Simoyi
2:00-25. Computational Modeling of Convective Chemical Waves. D. A. Vasquez
2:40-26. The influence of surface-tension-induced convection on a propagating front. H. M. Wilke
3:20-Intermission
3:40-27. Viscous fingering in reaction-diffusion systems. G. M. Homsy, A. De Wit
4:00-28. Numerical evidence of stationary and breathing concentration patterns in the Oregonator with equal diffusivities. R. J. Field, J. D. Dockery
4:20-29. Oscillatory Chemical Kinetics with Stochastic Feedback. K. E. Bassler, D. A. Browne
4:40-30. Frontal polymerization in microgravity. J. Warren, V. Nguyen, W. Ainsworth, J. Masere, Y. Chekanov, H. M. Wilke, V. I. Volpert, J. A. Pojman

MONDAY MORNING

Section B
Chemical Waves, Fronts and Patterns
Pattern Formation

V. Volpert, Organizer, Presiding

8:20-40. Patterns and fronts: how can they form in One Sided Fed Reactors? P. De Kepper, P. Blanchedeau, J. Boissonade
9:00-41. Control of Oscillations and Turing Structures in the Chlorine Dioxide-Iodine-Malonic Acid Reaction by Illumination. I. R. Epstein, M. Dolnik, A. K. Horvath, A. P. Munuzuri, A. M. Zhabotinsky
9:40-42. Cellular Acidity Fronts. D. Horvμath, &. Tμoth
10:20-Intermission
10:40-43. Resonant pattern formation in an oscillatory chemical reaction-diffusion system. A. L. Lin, K. Martinez, M. Bertram, H. L. Swinney, A. Ardelea, G. F. Carey
11:20-44. Fixation of dissipative structures as microscopic polymer patterns. M. Shimomura, N. Maruyama, T. Koito, O. Karthaus
11:40-45. Complex pattern formation in the polyacrylamide-methylene blue-oxygen reaction. O. Steinbock

MONDAY AFTERNOON

Section B
Chemical Waves, Fronts and Patterns
Thermal Fronts and Flames

O. Steinbock, Presiding

1:20-62. Diffusive and hydrodynamic instabilities in flames. P. D. Ronney
2:00-63. Hopping motion in a chemically reacting system. A. Palacios, M. Gorman
2:40-64. Interaction of counterpropagating hot spots in solid fuel combustion. A. Bayliss, B. J. Matkowsky
3:20-Intermission
3:40-65. Spin head-doubling behavior in frontal polymerization of multifunctional acrylates. J. A. Pojman, T. Meehan, F. D. Stewart, J. Masere
4:00-66. Control of chemical waves by an external electric field. H. Sevcikova
4:20-67. withdrawn
4:40-68. Peculiarities of frontal regimes: kinetics of metal-containing monomers in the (co)polymerization in the solid phase. S. I. Evstratova, B. M. Zuev, G. I. Dzhardimalieva, I. E. Uflyand, A. D. Pomogailo

Tuesday Morning

Section B
Chemical Waves, Fronts and Patterns
Industrial Applications of Frontal Processes

R. J. Field, Presiding

9:00-86. Traveling surface reaction zone in the metal-ion catalyzed acid dissolution of aluminum. M. McCutcheon, R. Fuller, A. Coursey, N. Sethi, J. Josephs, F. Onyemauwa, A. Scheeline, C. L. Cobb
9:40-87. In and On Mesoporous Glass: Traveling BZ Waves as Probes of Gel Structures. V. A. Davydov, H. Nagasawa, Y. Morikawa, T. Ohmori, T. Amemiya, T. Yamaguchi
10:20-Intermission

10:40-88. Morphology and phase separation kinetics of binary polymer mixtures under thermodynamically non-uniform conditions. H. Nishioka, K. Kataoka, K. Endoh, Q. Tran-Cong
11:20-89. Temperature patterns on hollow cylindrical catalytic pellets. J. Annamalai, D. Luss

Section B
Chemical Waves, Fronts and Patterns
Industrial Applications

C. L. Cobb, Presiding

1:20- 106. **Withdrawn**
2:00- 107. Modeling of isothermal frontal polymerization. V. A. Volpert
2:40- 108. Preparation of gradient materials via frontal polymerization. Y. A. Chekanov, J. A. Pojman
3:00- 109. Spatio-temporal pattern formation in Pt(100) during CO oxidation at elevated pressures. J. Lauterbach
3:20-Intermission
3:40- 110. Percolative Diffusion in Mixed Adlayers and its Influence on Chemical Wave Propagation in Surface Reactions. J. W. Evans, P. A. Thiel, D-J. Liu
4:00- 111. Generation and propagation of chiral asymmetry. D. Kondepudi
4:20- 112. Cellular Trains in Oscillatory Media. D. A. Browne, D. Battogtokh

WEDNESDAY EVENING

Section H
Poster Session: Chemical Waves, Fronts and Patterns

G. C. Schatz, Presiding

7:00-9:00

305.- Isothermal frontal polymerization: front propagation in experiments and in theory. V. A. Volpert, J. A. Pojman, L. L. Lewis, C. A. Spade
306.- Determination of a diffusion coefficient using Liesegang Rings: A physical chemistry laboratory experiment. R. Al-Kaisi, J. A. Pojman
307.- Polymeric foam experiments in microgravity: Results from the NASA KC-135A parabolic flight experiments. J. A. Pojman, F. Stewart, M. Kendrick, P. N. Wahjudi, V. V. Nguyen, J. R. Warren, W. J. Ainsworth
308.- Two-dimensional frontal polymerization. J. Warren, J. A. Pojman
309.- Wavefront velocities of the BZ reaction in a varying gravity environment. J. Lauterbach
310.- Experimental investigation of the effects of model drugs on pH-oscillators. R. A. Siegel, G. P. Misra
311.- Free convection effects on formation of polymer properties . T. M. Yudina, K. G. Kostarev

312.- Numerical analysis of TiC combustion synthesis:critical conditions for ignition. J-P. Petitet, D. Vrel, A. Aoufi
313.- Illumination Control of Turing Structures. I. R. Epstein, A. P. Munuzuri, A. K. Horvath, A. M. Zhabotinsky, M. Dolnik
314.- Pattern formation on curved surfaces. O. Steinbock, S. C. Mueller, N. Manz
315.- Pattern formation in a reaction-diffusion system with wave instability. I. R. Epstein, A. Rovinsky, A. M. Zhabotinsky, M. Dolnik
316.- The oxidation of organic acids by metal ions and metal-ion complexes. O. Steinbock, N. S. Dalal, B. Steinbock
317.- Sulfide-ion induced pattern formation in swelling polyacrylamide gels. O. Steinbock, J. C. Zahardis
318.- Limits of propagation for radical recombination waves. . P. Shabalin, E. N. Rumanov, V. I. Goldanski
319.- "Tunneling" of autowaves. E. N. Rumanov, S. V. Maklakov, A. Y. Dovzhenko
320.- Wave of evaporation in superheated liquid. E. N. Rumanov, I. E. Rumanov, A. Y. Dovzhenko
321.- The effective interfacial tension in miscible fluids. V. Volpert, T. Dumont, Y. Chekanov, J. Masere, J. A. Pojman
322.- Polymerization coupled to oscillating reactions: a mechanistic investigation of acrylonitrile polymerization in the belousov-zhabotinsky reaction in a batch reactor. J. A. Pojman, G. Misra, R. P. Washington, W. W. West