

Symposium 4

Title: **Nanoparticles and Colloids in Analysis**

Chair/Co-Chair: W. L. Hinze, S. Yamada

Chair Assistant: Fadwa Odeh

Location: 177 Snell

Monday June 13, 2005

Presiding: W. L. Hinze, C. D. Tran, D. W. Armstrong, S. Yamada

Paper	Time	Title and Authors
4-01***	11:00 - 11:40 AM	Expanding the Utility and Understanding of Room Temperature Ionic Liquids: Including Micelle Formation and Interactions with Gold Nanoparticles D. W. ARMSTRONG
4-02**	11:40 - 12:00 AM	Development of a Universal Method for the Determination of Enantiomeric Compositions of Pharmaceutical Products C. D. TRAN, V. I. Grishko, D. Oliveira
4-03**	12:00 - 12:20 PM	Determination of Environmentally Important Metal Ions by Fluorescence Quenching in Micellar Solutions F. Nome, H. D. FIEDLER, E. Sapelli, G. C. Bedendo, R. S. Mello, L. V. Vargas
4-04**	1:30 - 1:50 PM	Solid-Phase Microextraction: A Link Between Micellar Extraction and Gas Chromatography V. PINO, F. J. Conde, J. H. Ayala, A. M. Afonso, V. González
4-05**	1:50 - 2:10 PM	Development of Functionalized Admicelles in Separation Science T. SAITOH, M. Hiraide
4-06**	2:10 - 2:30 PM	Powerful Preconcentration Method for Ultra Trace Amounts of Polycyclic Aromatic Hydrocarbons and its Applications to Environmental Analysis S. Igarashi, Y. TAKAGAI

4-07**	2:30 - 2:50 PM	Cloud Point Extraction as a Preconcentration Step for the Analysis of Metals in Environmental and Biological Samples M. F. Silva, R. A. Olsina, L. FERNÁNDEZ
4-08***	3:20 - 4:00 PM	Enhanced Organic Photovoltaic Performance from Nanoparticle-Polymer Blends M. Reyes-Reyes, K. Kim, D. L. CARROLL
4-09**	4:00 - 4:20 PM	Morphological Control and Spectrometric Applications of Gold Nanorods S. YAMADA
4-10**	4:20 - 4:40 PM	Luminescent Nanoparticles as Labels for Biological Molecules T. NANN
4-11**	4:40 - 5:00 PM	Nanostructure-Assisted Laser Desorption Ionization Mass Spectrometry in Bioanalysis N. H. Finkel, Z. Guo, A. Ganawi, L. HE
4-12	5:00 - 5:20 PM	Gold Nanoparticle Matrices for Bioanalysis Using Matrix-Assisted Laser Desorption Ionization K. A. STUMPO, J. A. McLean, D. H. Russell

Tuesday June 14, 2005

Presiding: L. He, L. McGown, T. Saitoh

4-13**	10:30 - 10:50 AM	Chemical Separations Using Nanoparticles L. A. COLON, J. A. Anspach, H. Colón, G. Vicente, M. N. Dunkle
4-14**	10:50 - 11:10 AM	Gold Nanoparticles in Open-Tubular Capillary Electrochromatography and Supercritical Fluid Extraction J. D. GLENNON, E. Guihen, L. Yang, N. M. Scully, A. M. O'Keeffe, N. M. J. Curran, J.-M. Prat, G. P. O'Sullivan
4-15**	11:10 - 11:30 AM	Development, Evaluation and Applications of Nanoparticles as Stationary Phases for Gas Chromatography

R. E. SYNOVEC, G. M. Gross, J. W. Grate

- 4-16** 11:30 - 11:50 AM Non-Cross-Linking Aggregation of DNA-Carrying Nanoparticles for Single-Base Substitution Assay
M. MAEDA, K. Hosokawa, K. Sato
- 4-17** 11:50 - 12:10 AM Enzymatic Amplification of Chemical Signals Inspired by Biological Signal Transduction
J. KIKUCHI, Y. Sasaki
- 4-18** 12:10 - 12:30 PM Gold Nanoparticles in Bioanalytical Assays
N. T. K. Thanh, Z. ROSENZWEIG
- 4-19*** 1:30 - 2:10 PM Analytical Measurements Using Polymeric Surfactants
I. M. WARNER
- 4-20** 2:10 - 2:30 PM Liposome Enhanced Firefly Bioluminescent Assay of ATP in the Presence of Surfactants
H. TANI, T. Kamidate
- 4-21** 2:30 - 2:50 PM Structure and Dynamics of Cationic and Nonionic Micelles: Neutron Scattering Studies
L. J. Magid, W.-R. CHEN
- 4-22*** 3:20 - 4:00 PM Studies of Reversible Guanosine Gels
L. B. MCGOWN, V. A. Dowling, L. W. Dick
- 4-23** 4:00 - 4:20 PM Hydrogen Bonded Molecular Macrocluster Formation at the Solid - Liquid Interface
K. KURIHARA
- 4-24* 4:20 - 4:40 PM Distribution of *tert*-Butylhydroquinone in Food-Like Emulsions by C₁₂ E₆
K. GUNASEELAN, L.S. Romsted
- 4-25 4:40 - 5:00 PM Partitioning of Polar Aromatic Compounds to Organogels and Applications for Their Extractive Removal from Organic Solvents
M. M. Stouffer, J. M. Braun, D. Fang, W. L. HINZE

Wednesday June 15, 2005

Presiding: W. L. Hinze, J. M. Costa-Fernandez

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| 4-26** | 10:00 - 10:20 AM | Analytical Applications of Metal Nanoparticles
O. A. SADIK, M. Omole, D. Andreescu, A. Wanekaya |
| 4-27** | 10:20 - 10:40 AM | Colloidal CdSe Quantum Dots as Novel Luminescent Probes for Selective and Sensitive Analytical Determination of Trace Amounts of Ions in Water Samples
J. M. COSTA-FERNANDEZ, M. T. Fernández-Argüelles, W. J. Jin, R. Pereiro, A. Sanz-Medel |
| 4-28 | 10:40 - 11:00 AM | Synthesis of Semiconductor Nanoparticles as Probes to Detect Supersaturated Dissolved Oxygen
Y. ZHANG, D. T. Johnson |
| 4-29* | 11:00 - 11:20 AM | Hybridization of DNA Functionalized Silver and Gold Nanoparticles in Aqueous Dispersions and on Gold Films
I. Tokareva, E. HUTTER |
| 4-30 | 11:20 - 11:40 AM | Novel Evaluation Method of Nanoparticle Dispersibility in Nanocomposites by TEM-Computerized Tomography and 3D Image Analysis
H. SASAKURA, H. Yoden, S. Noda, Y. Yamaguchi |
| 4-31 | 11:40 - 12:00 PM | Systems Based on Polymeric Surfactant – Polyvinylpyrrolidone and Organic Reagents: Properties and Utilization in Analysis
O.V. MIKULENKO, F. A. Chmilenko |