

ΕΡΕΥΝΗΤΙΚΟ ΙΝΣΤΙΤΟΥΤΟ ΧΗΜΙΚΗΣ ΜΗΧΑΝΙΚΗΣ ΚΑΙ ΧΗΜΙΚΩΝ ΔΙΕΡΓΑΣΙΩΝ ΥΨΗΛΗΣ ΘΕΡΜΟΚΡΑΣΙΑΣ

Οδός Σταδίου, Πλατάνι, Πάτρα http://www.iceht.forth.gr

ΣΕΜΙΝΑΡΙΟ

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OEMA: DEVELOPMENT OF ADVANCED MICROEMULSION

SYSTEMS FOR ENVIRONMENTAL APPLICATIONS

ΤΟΠΟΣ: Αίθουσα Σεμιναρίων ΕΙΧΗΜΥΘ-ΙΤΕ

ΗΜΕΡΟΜΗΝΙΑ: Παρασκευή, 7 Σεπτεμβρίου 2001

ΩPA: 19:00

ПЕРІЛНЧН

Surface or interfacial forces often resist the cleaning process and limit remediation of oil-contaminated materials. Surfactant-based systems show great promise for overcoming these surface / interfacial forces. To be successfully implemented, surfactant-based processes must be both technically and economically viable. The economic viability of surfactant-enhanced aquifer remediation requires maximizing the contaminant removal efficiency (ie., using supersolubilization or middle phase microemulsion systems) and decontamination of the surfactant stream for reinjection. This presentation will discuss the inherent limitations of traditional remediation processes, describe the basis for surfactant-enhanced remediation systems, and demonstrate the development and implementation of surfactant-enhanced aquifer remediation. Laboratory and field results will be presented to illustrate the robustness of this approach for a range of contaminants and geological environments. This presentation will also discuss recent advances in microemulsion formulation that reduce the surfactant requirements and thus improve the economics of surfactant-based systems, including the use of ultra-low surfactant concentrations and / or combined hydrophilic and lipophilic linkers. Application of these advances to other fields will also be described.