

## USA

### ADVANCED HIGH POWER BATTERIES WITH IMPROVED LIFE AND SAFETY FOR HEV APPLICATIONS

**K. Amine**, J. Liu, I. Belharouak & S.H. Kang  
Argonne National Laboratory, 9700 South Cass Ave., Argonne, IL 60439, USA

### MATERIALS FOR SOLID STATE LIGHTING

**A. K. Cheetham**, N. Sharma, R. Le Toquin and G. Gundiah  
International Center for Materials Research, University of California, Santa Barbara, CA 93106, USA

### THE FUTURE ROLE OF AFRICA IN THE MATERIALS WORLD NETWORK

**A. De Graaf**

Directorate for Mathematical and Physical Sciences, National Science Foundation  
4201 Wilson Boulevard, Suite 1005, Arlington, VA 22230, USA

### SYNTHESIS AND CHARACTERIZATION OF NEW CHALCOGENIDE MATERIALS FOR HEAVY METAL REMEDIATION

**PK Dorhout**  
Department of Chemistry, Colorado State University, Fort Collins, Colorado 80523, USA.

### BUILDING BLOCK APPROACH TO THE DESIGN AND SYNTHESIS OF ZEOLITE-NET-LIKE METAL-ORGANIC FRAMEWORKS (ZMOFs) WITH EXTRA-LARGE CAVITIES.

**M. Eddaoudi**, Y. Liu, V. Kravtsov, R. Luebke, R. Larsen.  
Department of Chemistry, University of South Florida, Tampa, Florida

### NEW MATERIALS FOR THE DELIVERY AND VACCINES

**JMJ Frechet**  
Department of Chemistry, University of California, Berkeley, CA 94720-1460, and, Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

### DIRECTED ASSEMBLY OF CLUSTER-BASED INORGANIC-ORGANIC HYBRID MATERIALS

**A. Lachgar** & A. Zhou

Department of Chemistry, Wake Forest University, Winston-Salem, USA

### SELF-LEARNING KINETIC MONTE CARLO SIMULATIONS OF THIN FILM GROWTH

**A. Kara**

Department of Physics, Kansas State University, Cardwell Hall Manhattan KS 66506, USA

### THERMAL STRESS ANALYSIS OF APS, EBPVD, AND DVC THERMAL BARRIER COATINGS USED IN POWER GENERATING TURBINES

**P. F. Mensah**, Nalini Uppu, Ravinder Diwan, and Michael Stubblefield  
Department of Mechanical Engineering, Southern University, Baton Rouge, LA 70813

### SUSTAINABLE ARCHITECTURE: A COLLABORATIVE APPROACH TO MATERIALS-BASED DESIGN-BUILD

**D. Osseo-Asare**

Graduate School of Design, Harvard University, 48 Quincy Street, Cambridge, MA 02138, USA

### SYNTHESIS OF MONODISPERSE HEMATITE PARTICLES VIA THE GEL-SOL PROCESS;

### SHAPE MODIFICATION BY IN-SITU-GENERATED SULFATE IONS

Q. Liu and **K. Osseo-Asare**  
Department of Materials Science and Engineering, Penn State University University Park, PA 16802, USA

### AQUEOUS STABILITY DIAGRAMS AS TOOLS FOR MATERIALS SYNTHESIS AND PROCESSING: THE ABC METHOD

**K. Osseo-Asare**

Department of Materials Science and Engineering, Penn State University University Park, PA 16802, USA

### COMPUTATIONAL NANOSCIENCE: THE BASIS FOR DESIGNING FUNCTIONAL MATERIALS ATOM BY ATOM

**F. S. Rahman**

Department of Physics, Kansas State University, Cardwell Hall Manhattan KS 66506, USA

### NEW BULK AND NANO MAGNETIC MATERIALS

**R. Seshadri**

Materials Department, University of California, Santa Barbara, CA 93106, USA

### METAL-ORGANIC FRAMEWORKS FOR GAS STORAGE

**OM Yaghi**

Department of Chemistry, University of Michigan, Ann Arbor, MI 48109, USA

**TITLE**

**R. Yazami,**

CNRS-CALTECH International Associated Laboratory Materials for  
Electrochemical Energetics, ME2, Division of Engineering and Applied Science,  
California Institute of Technology, 138-78 1200 E. California Boulevard,  
Pasadena, CA 91125, USA