



NATO ADVANCED RESEARCH WORKSHOP:

“From Simplicity to Complexity in Chemistry and Beyond: Interplay Theory and Experiment”.

**26-28th May 2008,
Baku, Azerbaijan**



PROGRAM

Day 1, 26 of May

Mediator: Jamal Musaev (Emory University, USA)

11:00 - 12:00

Welcome and Opening Remarks

Mediator: Craig Hill (Emory University, USA)

12:00 – 12:50

David Avnir (The Hebrew University of Jerusalem, Israel)
“Chirality of Materials: A Guided Tour”

12:50 – 13:40

Lee Cronin (University of Glasgow, UK)
“Dimensional Reduction in Inorganic Systems: From Dissipative Dynamics to Artificial Life”

13:40 – 15:00

Lunch

15:00 – 15:50

Michel Che (Université Pierre et Marie Curie, France)
“Water-Mediated Assemblies and Processes in the Synthesis of Oxide-supported Catalysts”

15:50 – 16:40

Andrea Dei (University of Florence, Italy)
“Emergence, Symmetry Breaking and Neurophenomenology as pillars of the Chemical Tenet”

16:40 – 17:00

Coffee Break and Discussion

17:00 – 17:50

Joan S Valentine (University of California at Los Angeles, USA)
“How do ALS-associated Mutations in Superoxide Dismutase 1 Promote Aggregation of the Protein?”

17:50 – 18:40

Vagif Farzaliyev (Azerbaijan National Academy of Sci., Azerbaijan)
“New Antioxidants with Combined Actions”

19:30 - 21:00

Special Dinner (By Azerbaijan National Academy of Sciences)

Day 2, 27 of May

Mediator: Jamal Musaev (Emory University, USA)

9:00 - 9:50

Craig Hill (Emory University, USA)
“Useful Structural or Dynamic Function by Complex Systems Based on Inorganic Clusters”

9:50 - 10:40

Tofig Nagiyev (Azerbaijan National Academy of Sciences, Azerbaijan)
“Highly Effective Iron Porphyrin-Immobilized Catalytic Systems for the Processes of Hydroxylation and Epoxidation of Alkanes and Alkenes”.

10:40 - 11:00

Coffee Break and Discussion

11:00 - 11:50

Keiji Morokuma (Emory University, USA)
“Effects of Protein Environments on the Mechanism of Metalloenzymatic Reactions”

11:50 - 12:40

Feliu Maseras (Institute of Chemical Research of Catalonia, Spain)
“Homogenous Computational Catalysis: For Mechanism of Cross-Coupling and Other C-C Bond Formation Processes”

12:40 - 14:00

Lunch

14:00 - 14:50

Dante Gatteschi (University of Florence, Italy)
“Complexity in Molecular Magnets”

14:50 - 15:40

Thorsten Glaser (Universität Bielefeld, Germany)
“Rational Design of Single-Molecule Magnets”

15:40 - 16:00

Coffee Break and Discussion

Mediator: Feliu Maseras (Inst. of Chem. Research of Catalonia, Spain)

16:00 - 16:50

Didier Astruc (University Bordeaux 1, France)
“Metallodendrimers: A Precise and Well-Organized Nanoworld Including Applications to Sensing and Catalysis”

16:50 - 17:40

Ekkehard Diemann (Universität Bielefeld, Germany)
“A Wheel-shaped Nanosized Molybdenum Oxide Based Nanoreactor: Unprecedented Acid and Assembly Behaviour as well as Electronic Structure”

17:40 - 18:30

Jamal Musaev (Emory University, USA)
“Computational Approaches to Catalysis: Understanding the Fundamental Principles of Catalysis and Predicting New and more Efficient Catalysts.”

19:30 - 21:00

Dinner

Day 3, 28 of May

Mediator: Vagif Farzaliyev (Azerbaijan National Acad. of Sci.)

9:00 - 9:50

Akif Azizov (Azerbaijan National Academy of Sciences, Azerbaijan)
“Transition Metal Cationic Catalysis of Oligomerization and Polymerization Processes”

9:50 - 10:40

Josep Poble (Universitat Rovira i Virgili, Spain)

“From Lindqvist Anions to Giant Structures: DFT Studies of Polyoxometalates”

10:40 - 11:00

Coffee Break

11:00 - 11:50

Valentin Ananikov (Russian Academy of Science, Russia)
“Homogeneous, Heterogeneous and Nano-Sized Catalytic Systems:
Simple Solution of Complex Chemical Problems”

11:50 - 12:40

Ajdar Majidov (Azerbaijan National Academy of Sciences, Azerbaijan)
“Reactions of Coordinated Ligands. Oxidative Hydrogenation and
Reduction of Coordinated Azomethane Groups”

12:40 - 13:30

Achim Muller (Universität Bielefeld, Germany)
“Porous Capsules Interact Specially with Their Environment and One
Another”

13:30 - 14:30

Closing Ceremony

14:30 - 18:00

Lunch and Tour in Baku

19:00 -

Special Dinner