R. Agladze Memorial Meeting

2nd International Symposium

Electrochemistry Of Manganese Electrodeposition, Corrosion and Passivity Of Metallic Materials

October 17 – 20, 2001, Tbilisi

ABSTRACTS

Georgian Academy of Sciences
Georgian Technical University

R. Agladze Memorial Meeting

October 17-20, 2001 at the Georgian Technical University, Tbilisi, Georgia

Organized by: Georgian Academy of Sciences
Georgian Technical University
Georgian Chemical Society

Wednesdey **(10/17/01)** morning: **8:00AM - 12:15PM** registration

afternoon: **14:00PM - 16:30PM - GTU, Main Hall**:
Joint Session of the Georgian Academy of Sciences, Georgian Technical University and Georgian Chemical Society

Welcoming Remarks:

A Tavkhelidze (President of the Georgian Academy of Sciences)
R. Khurodze (Rector of Georgian Technical University)

The Life and Scientific Activity of Rafael Agladze

G. Gvelesiani (Chairman of the Chemical and Metallurgical Department of Georgian Academy of Scienses)

Rafael Agladze and Moscow Mendeleev University

P. Sarkisov (Rector of Mendeleev University of Chemical Technology. Russia)

Memoirs

Thursday **(10/18/01)** morning: **9:30AM - 14:00PM, Small Hall**

Symposium on Electrochemistry of Manganese, Deposition and Corrosion of Metallic Materials

Oral Session

Introductory Lections:

T. Agladze (Georgian Technical University): "History and Perspectives of the Manganese Electrochemistry
J.Shengelia, D.Kuprava, J.Gvelesiani, T.Chakhunasvili, R.Demetrasvili, D.Chichua, N.Kalmakhelidze, G.Agladze, T.Agladze (Georgia Engineering. Rustavi EMD Plant): "Industrial Aspects of Production of Manganese Compounds At Rustavi EMD Plant".
G. Agladze (Georgian Technical University): " New Developments in Manganese Hydrometallurgy"

Coffee Brake

Electrodeposition of Metals and Alloys

W. Plieth (Technical University of Dresden): "Electrochemical Alloy Deposition: New properties by Intermetallic Compounds"
P. Cavallotti (Politechnico di Milano): "Electrodeposition of Iron group Alloy for Electronical Application"
V. Kudryavtsev, et al., (Mendeleev University of Chemical Technology of Russia): "Electrodeposition of Ti—B Alloys and Composite Coatings"
T. Khoperia (Institute of Physics, Georgian Academy of Sciences): "Electroless Metallization of Metalic, Semiconductory and Dielectric Metals"
T. Lejava (R. Agladze Institute of Inorganic and Electrochemistry. Georgian Academy of Science): "Abnormal Effect of Supporting Electrolyte Upon Electrodeposition of Metals"

Thursday afternoon: **3:00PM-5:00PM**

Corrosion and Passivity of Metalic Materials

D. D. Macdonald, Dr. Mirna Urquidi Macdonald (Pennsylvania State University): "The Holy Grail - Deterministic Prediction of Damage in Passive Systems"
P. L. Bonora (University of Trento): "Electrochemical Methods of Organic Coating Evolution"
N. Zoidze, N. Luarsabishvili, I. Lortkipanidze, D. Ramazishvili, E. Khuntsaria (Institute of Mettalurgy, Academy of Sciences of Georgia) "Effect of Microadditivies On The Sulphide Cracking Of The High-Strength Steel"
D. Jishiashvili, V. Gobronidze, Z. Shiolashvili (Institute of Cybernetics, Georgian Academy of Sciences): "Passivation of Ga-As by Ge Oxinitride Films"
T. Agladze (Georgian Technical University): Modeling of Dissolution - Deposition Reaction of Iron Group Metals"

Friday **(10/19/01)** morning: **9:00AM-12:30PM, Museum Hall**

Poster Session

1. High-Efficiency Reactors for Obtaining of Metal Powders
E. Chichinadze, Tin. Lezhava (R. Agladze Institute of Inorganic Chemistry and Electrochemistry of the Georgian Academy of Sciences)

2. Improvement of Anode Process in the Manganese Hydrometallurgy
E. Chichinadze, Tin. Lezhava, S. Dolidze (R. Agladze Institute of Inorganic Chemistry and Electrochemistry of the Georgian Academy of Sciences)

3. The Peculiarites of Chalcopyrite Suspension Anodic Oxidation in the Electrolyte Aqueous Solutions
A. Kakhniashvili, G. Agladze, G. Tsutsumia, A. Benashvili (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

4. Non-passivated Anodes in the Electrosynthesis of Manganese Dioxide
Tin. Lezhava, E. Chichinadze (R. Agladze Institute of Inorganic Chemistry and Electrochemistry of the Georgian Academy of Sciences)

5. Synthesis of Ferrite Resulting Oxides by Electrolysis
Acad. R. Agladze, M. Jaliasvili (R. Agladze Institute of Inorganic Chemistry and Electrochemistry of the Georgian Academy of Sciences)

6. Investigation of Electrolytic Manganese Electrosynthesis Suspension Bath Process
G. Agladze, N. Gogishvili, N. Demuria (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

7. The Ways of the Improvement of Semi-Electrochemical and Electrochemical Methods of Potassium Permanganate Production
G. Agladze, V. Kveselava (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

8. Electrode Constructions for an Electrochemical Production
Zh. Kebadze, V. Pruidze, . Kakuria, G. Gobechia (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

9. Determination of Electrochemical Activity of Electrolytic Manganese Dioxide Obtained in Different Conditions in the Alkaline Model Cell
T.Chakhunashvili, L. Japaridze, T. Rokva, L. Shaduri (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

10. Use of Carbon-Graphite Fiber Materials in the Synthesis of Electrolytic Manganese Dioxide and in Chemical Sources of Current of Manganese-Zinc system
Zh. Kebadze, L. Kakuria, M. Dadunashvili (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

11. Perspective Cathode Materials Based on Manganese Dioxide for Lithium-Ion Secondary Batteries
E. Kachibaia, R. Imnadze, R. Akhvlediani, Sh. Japaridze, T. Paikidze (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

12. Manganese Dioxide Chemical Dissolution in the Manganese Sulfate Acid Solutions
L. Japaridze, G. Tsagareli, Sh.Makhatadze (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

13. About Some Specific Features of Copper Electrodeposition Caused by Intermediate High Stability
T. Lezhava, N. Ananiasvili, J. Metreveli, M. Kikabidze (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

14. Research for New Possibilities to Intensify Electroflating
N. Ananiasvili, M. Kikabidze,T.Lezhava, J. Metreveli, (R. Agladze Institute of Inorganic Chemistry and Electrochemistry, Georgian Academy of Sciences)

15. Organisation of Production of Manganous Oxide as Marketable Product at "EMD" Plant
T. Chakhunashvili, O. Chirakadze, J. Shengelia, D. Kuprava, J. Gvelesiani, R. Demetrashvili, G. Rusiashvili, R. Buzaladze, G. Agladze, T. Agladze (Georgia Engineering Ltd, EMD Ltd)

16. Electrolytic Production of Metallic Manganese and Manganese Dioxide by Means of Manganese Carbonate as an Intermediate Product
G. Agladze, N.Koiava, E. Chkhikvadze, N. Jokhadze, K. Zaridze (Georgian Technical University)

17. Implementation of Total Quality Management System in Manganese Compounds Production
D. Kuprava, O. Chirakadze, R. Demetrashvili, N. Kalmakhelidze, D. Chichua, G. Rusiashvili (Georgia Engineering Ltd, EMD Ltd)

18. Some Questions About the Receipt of Anticorrosion Glassenamel coatings on the basis of Manganese Coating Glasses
T. Cheishvili, A. Sarukhanishvili (Georgian Technical University)

19. Impact of Inhibitors on Mechanical Properties of Carbon Steel in Mineral Acidic Water Solutions (H_2SO_4, HCl)
N. Kemkhadze (Georgian Technical University. Corrosion Center)

20. Spectropotentiostatic Method of Investigation of Electrochemical –Corrosion Behavior of Metals
G. Agladze, G. Gordadze, N. Koiava, N. Nioradze, N. Pashalishvili
(R. Agladze Institute of Inorganic Chemistry and Electrochemistry. Georgian Academy of Sciences)

21. The Anodic Behavior of the Chromium Containing Ferrosilicon Alloys
I.Avaliani, L. Akhvlediani, E. Gozalishvili, M. Mikaberidze (The Institute of Metallurgy, Academy of Sciences of Georgia)

22. Influence of Magnetic Fields on Paint and Varnish Materials That Are Applied With a Method of Electrosedimentation
N. Chkhubianishvili, T. Shengelia, I. Krilova (Georgian Technical University, Department of Environment Protection)

23. Analysis of Influence of Magnetic Processing on Paint and Varnish Coatings
N. Chkhubianishvili, T. Shegelia (Georgian Technical University, Department of Environment Protection)

24. Improvement of Trtibomechanical Properties by Means of Combined Friction and Galvanic Coatings.
S. Iashvili, M. Chelidze, N. Kharabadze (R. Dvali Institute of Machines Mechanic, Georgian Academy of Sciences, R. Agladze Department of Electrochemical Engineering, Georgian Technical University)

DISCUSSION

Discussion Leaders:

*** N. Zoidze**
*** D. Khoperia**
*** G. Agladze**