



15^{èmes} JOURNEES DES ACTINIDES
February 26-27, 1985
Liège, BELGIUM

PROGRAM, ABSTRACTS
LIST OF PARTICIPANTS

Under the Auspices of the Inter-University
Institute for Nuclear Sciences. (Belgium)

ORGANIZER

J.FUGER. Laboratory of Analytical
Chemistry and Radiochemistry B6
University of Liège
B-4000 Sart Tilman - Liège, Belgium
Tel: (32-41) 561470

P R O G R A M

MONDAY, February 25, 1985.

16.00 - 19.00 REGISTRATION
20.00 - 21.00 WELCOME COCKTAIL
21.00 DINNER

TUESDAY, February 26, 1985.

8.30 - 9.00 REGISTRATION (cont.)
9.00 - 9.15 WELCOME - INTRODUCTORY REMARKS: J. FUGER
9.15 - 10.30 SESSION I. ELECTRONIC STRUCTURE.
 CHAIRPERSON : B.R. COOPER

1. MAGNETIC EXCITATIONS IN PLUTONIUM MONO-
ANTIMONIDE.
G.H. Lander, W.G. Stirling, J. Rossat-Mignod
J.C. Spirlet and O. Vogt.
2. ^{121}Sb MÖSSBAUER SPECTROSCOPY IN PuSb AND
 $\text{Pu}_{0.15}\text{Y}_{0.85}\text{Sb}$.
J.S. Sanchez, J.M. Friedt, J.C. Spirlet,
J. Rebizant and O. Vogt.
3. VOLUME DEPENDENCE OF HYPERFINE INTERACTIONS
IN NpAs.
J. Moser, W. Potzel, F.J. Litterst, A. Krat-
zer, Ulrike Potzel, G.M. Kalvius, J. Gal,
M. Boge, J. Chappert and J.C. Spirlet.

4. THE MAGNETIC PHASE DIAGRAM OF THE $UAs_{1-x}Se_x$ SYSTEM IN ZERO MAGNETIC FIELD STUDIED BY NEUTRON DIFFRACTION FROM SINGLE CRYSTALS - PRELIMINARY RESULTS.

M. Kuznietz, P. Burlet, J. Rossat-Mignod and O. Vogt.

5. LATTICE DISTORTIONS AND MAGNETIC ANISOTROPY IN $UP_{0.3}S_{0.7}$ SINGLE CRYSTALS.
K. Mattenberger and O. Vogt.

also four Posters : Session IV 1 - 4

10.30 - 11.00

COFFEE BREAK

11.00 - 12.15

SESSION II. ELECTRONIC STRUCTURE (CONT.)
AND TRANSPORT PROPERTIES.

CHAIRPERSON : J. ROSSAT - MIGNOD

1. EXCITATION BEHAVIOR AND DISTORTIONAL EFFECTS IN HYBRIDIZING PLUTONIUM SYSTEMS.
Bernard R. Cooper and Amitava Banerjea.

2. CRYSTALLINE FIELD EFFECTS IN TETRAGONAL Np-INTERMETALLICS.

J. Gal, H. Pinto, H. Shaked, F.J. Litterst, L. Asch, W. Potzel and G.M. Kalvius.

3. COLLECTIVE MAGNETIC PHENOMENA ON ACTINIDE OXYGEN COMPOUNDS.

Basil Kanellakopoulos and Michael Bickel.

4. THERMOPOWER OF USb_xTe_{1-x} .

B. Frick, J. Schoenes and O. Vogt.

5. TRANSPORT PROPERTIES OF PSEUDOBINARY $U_{1-x}La_xTe$ COMPOUNDS.

J. Schoenes, B. Frick and O. Vogt.

V. Benedict



also one Poster : Session IV. 5

12.15 - 12.35

RIEN / GENERAL DISCUSSION OF SESSIONS I AND II.

12.35 - 14.15

LUNCH BREAK

14.15 - 16.00

SESSION III. SPECTROSCOPIC TECHNIQUES.

CHAIRPERSON : J. SCHOENES

1. SPIN-POLARIZED ELECTRONIC STATES IN U_3P_4 AND U_3As_4 .
W. Reim, J. Schoenes and Z. Henkie.
2. SYNCHROTRON RADIATION PHOTOEMISSION STUDY OF UFe_2 , UNi_2 and UPt_3 .
J. Ghijsen, R.L. Johnson, J.C. Spirlet and J.J.M. Franse.
3. FINAL STATE EFFECTS IN PHOTOEMISSION OF ACTINIDE OXIDES.
Jochen R. Naegele.
4. OXYGEN ADSORPTION ON UNi_2 STUDIED BY HREELS, AES AND XPS.
T. Gouder, M. Chtaib, R. Caudano and J.J. Verbist.
5. EXAFS MEASUREMENTS ON URANIUM COMPOUNDS IN SOLID STATE AND SOLUTION : DETERMINATION OF THE RADIAL ENVIRONMENT OF URANIUM.
P. Charpin, A. Dejean, G. Folcher, A. Navaza.
6. OPTICAL SPECTROSCOPY OF Np^{4+} IN $ThSiO_4$.
M.P. Lahalle, J.C. Krupa and C. Musikas.
7. MCD OF f^N -SYSTEMS.
C. Görrler-Walrand.

Also five Posters: Session IV. 6 - 10

16.00 - 16.15

GENERAL DISCUSSION ON SESSION III.

16.15 - 16.45

COFFEE BREAK

16.45 - 18.30

SESSION IV. POSTERS.

1. INTERPRETATION OF SPECIFIC HEAT MEASUREMENTS FOR An_3P_4 AND $AnOTe$ ($An = U, Th$) COMPOUNDS.
G. Amoretti, A. Blaise and R. Troć.

Vogel event notes

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2. PROGRAMME D'AJUSTEMENT DES PARAMETRES DE SPECTRES DE RESONANCE MOSSBAUER DE ^{237}Np .
Edgar Soulié et Thierry Thévenin.
3. HIGH PRESSURE X-RAY DIFFRACTION ON $\text{Bk}_{1-x}\text{Cf}_x$ ALLOYS.
J.P. Itié, J.R. Peterson, R.G. Haire, C. Dufour and U. Benedict.
4. POWDER NEUTRON DIFFRACTION STUDY OF ThZr_2D_x .
W. Bartscher, A. Boeuf, R. Caciuffo, J.M. Fournier, J. Rebizant, W.F. Kuhs and F. Rustichelli.
5. ELECTRICAL RESISTIVITY OF UP SINGLE CRYSTAL.
P.G. Thérond, J.M. Fournier, J. Schoenes and O. Vogt.
6. URANIUM OXIDES AS OXIDATION CATALYSTS : PHYSICO-CHEMICAL STUDIES OF STRUCTURE-ACTIVITY RELATIONSHIP.
H. Collette, V. Deremince-Mathieu, Z. Gabelica, J. B.Nagy and J.J. Verbist.
7. CALCULATION OF THE CRYSTAL FIELD PARAMETERS IN CsUF_6 .
Z. Gajek and J. Mulak.
8. ThSiO_4 : HOST MATRIX FOR THE SPECTROSCOPY OF U^{4+} .
C. Khan Malek and J.C. Krupa.
9. TWO-PHOTON ABSORPTION IN ACTINYL CRYSTALS.
J.R. G. Thorne, R.G. Denning, T.J. Barker
10. RAMAN SPECTROSCOPIC INVESTIGATIONS OF AQUEOUS THORIUM (IV) THIOCYANATE COMPLEXES.
J. Livet and C. Musikas.

WEDNESDAY, February 27, 1985.

9.00 - 10.30 SESSION V. SYNTHESIS AND CHARACTERIZATION.

CHAIRPERSON : M. PAGES

1. ENTHALPY OF FORMATION OF CALIFORNIUM SESQUIOXIDE.
L.R. Morss and J. Fuger.
2. ETUDE DES VALENCES ELEVEES D'ELEMENTS TRANS-URANIENS PAR THERMOCHROMATOGRAPHIE.
M. Fargeas, R. Frémont-Lamourane, Y. Legoux and J. Mérini.
3. PREPARATION AND REACTIVITY OF SOME NEW ORGANO-METALLIC COMPOUNDS OF URANIUM AND THORIUM.
J. Goffart and W. Beeckman.
4. NEW SYNTHESIS AND CHARACTERIZATION OF URANIUM AND NEPTUNIUM OXYSULFIDES.
M. Beauvy, J. Larroque, P. Mongis, C. Nabon, and B. Tournois.
5. A MOLTEN SALT PROCESS FOR THE PREPARATION OF METALLIC NEPTUNIUM.
L. Martinot.
6. NEW TERNARY URANIUM COMPOUNDS.
Z. Zołnierek, D. Kaczorowski and R. Troć.
Also five Posters : Session VI. 1-5

10.30 - 11.00

COFFEE BREAK

11.00 - 12.30

SESSION VI. POSTERS.

1. SYNTHESIS AND CRYSTAL STRUCTURE OF $\text{CoNp}_2\text{F}_{10}$, $8\text{H}_2\text{O}$ and $\text{CuNp}_2\text{F}_{10}$, $6\text{H}_2\text{O}$.
Alain Cousson, Hicham Abazli, José Jové, Françoise Nectoux, Madeleine Gasperin and Monique Pagès.
2. URANYL NITRATE/ N-N DIMETHYL FORMAMIDE COMPLEXES
P. Charpin, G. Folcher, M. Lance, M. Nierlich and D. Vigner.

3. STRUCTURE OF BIS(N,N-di-n-BUTYLDODECANAMIDE) DINITRATO DIOXOURANIUM (VI).
P. Charpin, M. Nierlich, N. Descouls and C. Musikas.
4. CHARACTERIZATION AND CRYSTAL STRUCTURE ANALYSIS OF A NEW TETRAMERIC URANYL COMPLEX :
 $[(UO_2)_4 O_2 Cl_4 (C_4H_8O)_2 (H_2O)_4]$.
J. Rebizant, M.R. Spirlet and J. Goffart.
5. ACTINIDE CERAMIC PHASES FOR NUCLEAR WASTE ISOLATION.
Alain Tabuteau, Alain Cousson, José Jové and Monique Pagès.
6. POTENTIAL APPLICATIONS OF THE TRUEX PROCESS AT THE HANFORD SITE.
W.W. Schulz and E.P. Horwitz.
7. SEPARATION OF FISSION PRODUCTS AND ACTINIDES BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY.
J.P. Glatz, H. Bokelund and S. Valkiers.

12.30 - 14.30

LUNCH BREAK

14.30 - 16.00

SESSION VII. SOLUTION CHEMISTRY AND ANALYTICAL APPLICATIONS.

CHAIRPERSON : W. MÜLLER

1. URANYL-SENSITIZED PHOTOOXIDATION REACTIONS.
G. Folcher, C. Giannotti and W. Mooney.
2. PREDOMINANT AQUEOUS AND SOLID COMPONENTS IN NATURAL URANIUM WATER SYSTEMS.
A.B. Muller and L.E. Duda.
3. DETECTION OF TRACE AMOUNTS OF PLUTONIUM BY LASER SPECTROSCOPY.
P. Peuser, G. Herrmann, H. Rimke, P. Sattelberger, N. Trautmann, W. Ruster, F. Ames, J. Bonn, H.-J. Kluge, U. Krönert and E.-W. Otten.

4. RADIOCHEMICAL ANALYSIS OF $^{242}\text{PuO}_2$ TARGETS IRRADIATED IN HIGH FLUX REACTORS.
P. De Regge, R. Boden and D. Huys.
5. CONSTANT-CURRENT COULOMETRIC DETERMINATION OF URANIUM IN URANIUM DIOXIDE.
G. Pattyn-Fauville and E. Merciny.
6. MASS DETERMINATION OF CONSTITUENTS IN BINARY AND TERNARY PLUTONIUM AND NEPTUNIUM COMPOUNDS.
O. Cromboom and H. Kutter.

Also two Posters : Session VI.6, 7

16.00 - 16.30	COFFEE BREAK
16.30 - 17.00	GENERAL DISCUSSION OF SESSIONS V TO VII.
17.00 - 18.00	<u>SESSION VIII. CONFERENCE SUMMARY AND PERSPECTIVES.</u> CHAIRPERSON : G.M. KALVIUS
20.00	CONFERENCE DINNER.