

# Contents

---

---

**Vol. 46, No. 5, 2004**

Simultaneous English language translation of the journal is available from MAIK "Nauka/Interperiodica" (Russia). Distributed worldwide by Springer Science + Business Media, Inc. *Radiochemistry* ISSN 1066-3622

---

---

Synthesis and Study of Binary Compounds of Actinides and Lanthanides: XXVI. Alloys of Cm with Fe

*V. M. Radchenko, M. A. Ryabinin, A. G. Seleznev<sup>†</sup>, S. I. Gorbunov,  
T. A. Chernakova, and V. G. Nagaitsev* **p. 417** [abstract](#)

Synthesis and Properties of Np(VI) and Pu(VI) Monophthalates

*N. N. Krot, A. A. Bessonov, M. S. Grigor'ev, I. A. Charushnikova, and V. I. Makarenkov* **p. 421** [abstract](#)

Crystal Structure of Uranyl  $\mu_3$ -Oxoacetate  $[(\text{UO}_2)_3(\mu_3\text{-O})_2(\text{OOCCH}_3)_2(\text{H}_2\text{O})_2]$

*I. A. Charushnikova, N. N. Krot, and Z. A. Starikova* **p. 429** [abstract](#)

Comparative Study of the Flexibility of Structural Complexes  
in Uranyl Sulfates, Chromates, and Molybdates

*S. V. Krivovichev* **p. 434** [abstract](#)

Phase Transitions and High-Temperature Crystal Chemistry  
of Polymorphous Modifications of  $\text{Cs}_2(\text{UO}_2)_2(\text{MoO}_4)_3$

*E. V. Nazarchuk, S. V. Krivovichev, and S. K. Filatov* **p. 438** [abstract](#)

Synthesis and Crystal Structure of  $\text{Cu}_2\{(\text{UO}_2)_3[(\text{S}, \text{Cr})\text{O}_4]_5\}(\text{H}_2\text{O})_{17}$

*S. V. Krivovichev and P. C. Burns* **p. 441** [abstract](#)

Synthesis, Structure, and Physicochemical Properties of Compounds  $\text{Pb}(\text{B}^{\text{V}}\text{UO}_6)_2 \cdot n\text{H}_2\text{O}$  ( $\text{B}^{\text{V}} = \text{P, As, V}$ )

*E. V. Suleimanov, N. G. Chernorukov, and A. V. Golubev* **p. 446** [abstract](#)

State of Difficultly Soluble Uranosilicates  $\text{M}^{\text{I}}\text{HSiUO}_6 \cdot n\text{H}_2\text{O}$  ( $\text{M}^+ = \text{Li}^+, \text{Na}^+, \text{K}^+, \text{Rb}^+, \text{Cs}^+, \text{NH}_4^+$ )  
in Saturated Aqueous Solutions

*N. G. Chernorukov, O. V. Nipruk, A. V. Knyazev, and E. Yu. Pegeeva* **p. 452** [abstract](#)

Extraction of U(VI) with Poly(Ethylene Glycol) in Two-Phase Aqueous Systems Containing Various Anions

*A. M. Saifulina and I. G. Tananaev* **p. 457** [abstract](#)

Extraction of U(VI), Th(IV), Pu(IV), Am(III), and Rare-Earth Elements from Nitric Acid Solutions  
with Diphenyl(dialkylcarbamoylmethyl)phosphine Oxides Substituted in the Methylene Bridge

*A. N. Turanov, V. K. Karandashev, A. N. Yarkevich, Z. V. Safronova, A. V. Kharitonov,  
N. I. Radygina, and A. M. Fedoseev* **p. 461** [abstract](#)

Influence of Temperature on Phase Separation in the Binary System Tetradecane–Nd(III) Nitrate Solvate  
with Tri-*n*-butyl Phosphate and Ternary System Tetradecane–Tri-*n*-butyl Phosphate–Nd(III) Nitrate  
Solvate with Tri-*n*-butyl Phosphate

*A. K. Pyartman, A. V. Kudrova, and V. A. Keskinov* **p. 468** [abstract](#)

Solubility of Tributyl Phosphate and Its Degradation Products in Concentrated Uranyl Nitrate Solutions  
and of Uranyl Nitrate in Tributyl Phosphate at Elevated Temperatures

*V. N. Usachev and G. S. Markov* **p. 471** [abstract](#)

Influence of Urea Concentration in Nitric Acid Solutions of Uranium  
on Precipitation of Ammonium Polyuranates with Ammonia

*V. G. Balakhonov, F. A. Dorda, V. S. Zagumennov, V. V. Lazarchuk, A. K. Ledovskikh, V. A. Matyukha,  
E. O. Portnyagina, and V. V. Tinin* **p. 475** [abstract](#)

Coprecipitation of Microamounts of Cs with Ferrocyanides of Various Metals

*V. V. Milyutin, V. M. Gelis, V. G. Klindukhov, and A. V. Obruchikov* **p. 479** [abstract](#)

Sorption of Thorium with Metal Hydroxides

*V. I. Plotnikov and V. I. Bannykh* **p. 481** [abstract](#)

Sorption of Cesium Iodide Radioactive Aerosols on Metal Felt  
during Oxidative Hydrolysis in Steam–Gas System

*S. A. Kulyukhin, N. B. Mikheev, A. N. Kamenskaya, I. A. Rumer,  
N. A. Konovalova, and V. L. Novichenko*<sup>†</sup> **p. 484** [abstract](#)

Radiochemical Diagnostics of Thermal Hydrolysis of Aluminum Trichloride

*S. B. Baronov, S. S. Berdonosov, Yu. V. Baronova, and I. V. Melikhov* **p. 490** [abstract](#)

Synthesis of Steroid Hormones Highly Labeled with Tritium  
and Their Use for Assessing the Activity of Aromatase

*V. P. Shevchenko, I. Yu. Nagaev, K. V. Shevchenko, N. F. Myasoedov, N. V. Bochkareva,  
L. A. Kolomiets, and I. V. Kondakova* **p. 494** [abstract](#)

Determination of the Isotope Composition and Content of U and Pu in Environmental Samples  
on the Ultrasmall Level by Isotope Dilution Mass Spectrometry

*A. V. Stepanov*<sup>†</sup>, *T. P. Makarova, V. D. Domkin, E. V. Pevtsova, V. M. Aleksandruk, O. V. Nikolaeva,  
I. V. Chubinskii-Nadezhdin, and Yu. V. Kulikov* **p. 500** [abstract](#)

Distribution of Technogenic Radionuclides in Alluvial Sediments and among Fractions of the Soil  
in the Near Zone of the Krasnoyarsk Mining and Chemical Combine

*V. G. Linnik, A. G. Volosov, E. M. Korobova, A. P. Borisov, V. N. Potapov, V. V. Surkov,  
A. Borghuis, J. Brown, and T. A. Alekseeva* **p. 508** [abstract](#)

Zinaida Vasil'evna Ershova (to the Centenary since Her Birth)

*M. V. Vladimirova* **p. 515** [abstract](#)

---