

Contents

Vol. 40, No. 4, 1998

Simultaneous English language translation of the journal is available from МАИК Наука/Interperiodica Publishing (Russia). Distributed worldwide by Plenum/Consultants Bureau. *Radiochemistry* ISSN 1066-3622

Centennial Anniversary of Discovery of Polonium

M. V. Vladimirova p. 299 [abstract](#)

Prediction of Physicochemical Constants of Francium, Radium, and Actinium

A. A. Abramov, O. V. Eliseeva, and B. Z. Iofa p. 302 [abstract](#)

Formation of Mixed Condensed Clusters (Pr, An)I₂ (An = Pa, U, Np, Pu) from Halide Melts

S. A. Kulyukhin and N. B. Mikheev p. 306 [abstract](#)

Uranium(IV) Phosphates. Crystalline Uranium(IV) Monohydrogen Phosphate Tetrahydrate

L. M. Voinova p. 309 [abstract](#)

Electronic Absorption Spectra of Some Neptunium(IV) β -Diketonates

I. A. Charushnikova, A. Yu. Garnov, V. P. Perminov, A. A. Bessonov, and N. N. Krot p. 312 [abstract](#)

Preparation of Neptunium(VII) in Alkali Solutions Using Iridium Compounds

V. P. Shilov, A. Yu. Garnov, and A. V. Gogolev p. 318 [abstract](#)

Reduction of Neptunium(V) in Alkali Solutions with Formate Ion
in the Presence of Palladium and Platinum

A. Yu. Garnov, A. V. Gelis, A. A. Bessonov, and V. P. Shilov p. 319 [abstract](#)

Kinetics and Mechanism of Np(VI) and Np(VII) Reaction with H₂O₂ in Alkali Solutions (1–8.5 M NaOH)

V. P. Shilov, A. V. Gogolev, and A. K. Pikaev p. 321 [abstract](#)

Complex Formation of Uranium(VI) with 8-Quinolinol and Its 5-Halo Derivatives
in Gelatin-Immobilized Uranyl Ferrocyanide Systems

O. V. Mikhailov p. 326 [abstract](#)

Simulation of Molecular Iodine Extraction by RED-4 (Dearomatized Diluent for Extraction)

O. P. Anisimov, V. K. Veselov, V. V. Isupov, and Yu. A. Rodionov p. 333 [abstract](#)

Extraction of Molecular Iodine with Solutions of Tributyl Phosphate in RED-4

O. P. Anisimov, V. K. Veselov, V. K. Isupov, and Yu. A. Rodionov p. 338 [abstract](#)

Specific Features of Separation of Plutonium and Neptunium in Processing of Spent Nuclear Fuel
at the RT-1 Complex

S. I. Rovnyi, L. V. Nedelina, V. M. Tarakanov, V. P. Ufimtsev, and P. P. Shevtsev p. 342 [abstract](#)

Coprecipitation of Transuranium Elements from Alkaline Solutions by the Method of Appearing Agents.

I. Coprecipitation of Pu(VI, V) with Manganese Dioxide

N. N. Krot, A. A. Bessonov, A. V. Gelis, V. P. Shilov, V. P. Perminov, and L. N. Astafurova p. 347 [abstract](#)

Sorption of UO₂²⁺ Ions by Quercetin Immobilized on Various Supports

T. G. Myasoedova, A. A. Revina, and N. B. Zharikova p. 353 [abstract](#)

Recovery of Transactinide Elements by Ion-Exchange Chromatography from Solutions
Containing Various Complexing Agents and Ion-Exchange Chromatographic Study
of the Chemistry of These Elements: Simulation Experiments

L. I. Guseva and G. S. Tikhomirova p. 357 [abstract](#)

Radionuclide Generator of ^{113m}In

I. E. Alekseev and S. I. Bondarevskii p. 362 [abstract](#)

A New Method for Preparing Carrier-Free ⁶⁸Ge

I. E. Alekseev and A. E. Antropov p. 363 [abstract](#)

Automated Synthesis of Radiopharmaceuticals for Positron Emission Tomography

R. N. Krasikova **p. 364** [abstract](#)

Quality Control of Radiopharmaceuticals for Positron Emission Tomography

O. S. Fedorova and M. V. Korsakov **p. 373** [abstract](#)

Accumulation of Zirconium in Radioactive Strontium–Borosilicate Glasses

V. V. Gromov, A. A. Khodakov, and A. A. Minaev **p. 379** [abstract](#)

Decontamination of Soils of Gur'ev Oblast from ^{137}Cs Originating from Underground Nuclear Explosions

K. N. Chaliyan and D. E. Chirkst **p. 382** [abstract](#)

Radioactive Contamination of the Baltic Sea in the Region of the Leningrad Nuclear Power Plant
in 1971–1996

*L. I. Gedeonov[†], M. I. Belen'kii, V. M. Gavrilov, Z. G. Gritchenko, L. M. Ivanova, L. N. Lazarev,
T. E. Orlova, Yu. A. Panteleev, and V. P. Tishkov* **p. 385** [abstract](#)

Radiation-Chemical Resistance of Anion Exchangers and Safety of Sorption Processes in Nitric Acid
Solutions. I. Causes of Failure of the Sorption Column of the Unit for Production of ^{238}Pu
at the Radioisotope Plant, Mayak Production Association

*S. A. Bartenev, L. N. Lazarev, V. N. Romanovskii, S. A. Strelkov, A. I. Aldoshin, Yu. V. Glagolenko,
Yu. A. Malykh, and S. I. Rovnyi* **p. 391** [abstract](#)
