

Identification Data

Reference ID: 20001.0

Title: Ligand structure and diluent nature in defining improved Am³⁺ and Cm³⁺ separation using diglycolamides: a combined solvent extraction and DFT study

Authors: AS Kanekar; A Bhattacharyya; RK Mohapatra

Year: 2024

Journal: Dalton Transactions

DOI: DOI: 10.1039/D3DT03261B

URL: <https://xlink.rsc.org/?DOI=D3DT03261B>

Reference ID: 20002.0

Title: Radiometric evaluation of diglycolamide resins for the chromatographic separation of actinium from fission product lanthanides

Authors: V Radchenko; T Mastren; CAL Meyer; AS Ivanov; VS Bryantsev; R Copping; D Denton; JW Engle; JR Griswold; K Murphy; JJ Wilson; A Owens; L Wyant; ER Birnbaum; J Fitzsimmons; D Medvedev; CS Cutler; LF Mausner; MF Nortier; KD John; S Mirzadeh; ME Fassbender

Year: 2017

Journal: Talanta

DOI: DOI: 10.1016/j.talanta.2017.07.057

URL: <https://linkinghub.elsevier.com/retrieve/pii/S0039914017307798>

Reference ID: 20003.0

Title: Metal–carbon bonding in early lanthanide substituted cyclopentadienyl complexes probed by pulsed EPR spectroscopy

Authors: LE Nodaraki; J Liu; A-M Ariciu; F Ortu; MS Oakley; L Birnoschi; GK Gransbury; PJ Cobb; J Emerson-King; NF Chilton; DP Mills; EJM McInnes; F Tuna

Year: 2024

Journal: Chemical Science

DOI: DOI: 10.1039/D3SC06175B

URL: <https://xlink.rsc.org/?DOI=D3SC06175B>

Reference ID: 20004.0

Title: Solvent extraction of intra-lanthanides using mixture of TBP and TODGA in ionic liquid

Authors: AN Turanov; VK Karandashev; M Boltoeva

Year: 2024

Journal: Hydrometallurgy

DOI: DOI: 10.1016/j.hydromet.2020.105367

URL: <https://linkinghub.elsevier.com/retrieve/pii/S0304386X19308473>

Reference ID: 20005.0

Title: THE ACTINIDE-LANTHANIDE SEPARATION CONCEPT

Authors: GJ Lumetta; AV Gelis; JC Carter; CM Nicer; MR Smoot

Year: 2014

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2014.895638

URL: <http://www.tandfonline.com/doi/abs/10.1080/07366299.2014.895638>

Reference ID: 20006.0

Title: TODGA-DOHyA: Physicochemical Insights into a Stable Solvent System for Nuclear Reprocessing

Authors: P Narayanan; S Mishra; K Rama Swami; T Prathibha; D Narasimhan; RL Gardas; KA Venkatesan

Year: 2024

Journal: Journal of Chemical & Engineering Data

DOI: DOI: 10.1021/acs.jced.3c00359

URL: <https://pubs.acs.org/doi/10.1021/acs.jced.3c00359>

Reference ID: 20007.0

Title: Influence of Aqueous Phase Acidity on Ln(III) Coordination by N,N,N',N'-Tetraoctyldiglycolamide

Authors: AA Peroutka; X Wang; MJ Servis; JC Shafer

Year: 2024

Journal: Inorganic Chemistry

DOI: DOI: 10.1021/acs.inorgchem.4c01006

URL: <https://pubs.acs.org/doi/10.1021/acs.inorgchem.4c01006>

Reference ID: 20008.0

Title: NEW INSIGHT INTO THE AMERICIUM/CURIUM SEPARATION BY SOLVENT EXTRACTION USING DIGLYCOLAMIDES

Authors: S Chapron; C Marie; G Arrachart; M Miguiditchian; S Pellet-Rostaing

Year: 2015

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2014.1000792

URL: <http://www.tandfonline.com/doi/full/10.1080/07366299.2014.1000792>

Reference ID: 20009.0

Title: Coordination Chemistry with f-Element Complexes for an Improved Understanding of Factors That Contribute to Extraction Selectivity

Authors: AEV Gorden; MA DeVore II; BA Maynard

Year: 2012

Journal: Inorganic Chemistry

DOI: DOI: 10.1021/ic300887p

URL: <https://pubs.acs.org/doi/10.1021/ic300887p>

Reference ID: 20010.0

Title: Theoretical Study of Am(III) and Eu(III) Separation by a Bipyridyl Phosphate Ligand

Authors: X Zhang; L Ye; W Chen; X Zhang; W Chen; M Chen; P Huang

Year: 2024

Journal: ACS Omega

DOI: DOI: 10.1021/acsomega.3c09940

URL: <https://pubs.acs.org/doi/10.1021/acsomega.3c09940>

Reference ID: 20011.0

Title: Remarkable Improvement in Am 3+ and Cm 3+ Separation Using a Cooperative Counter Selectivity Strategy by a Combination of Branched Diglycolamides and Hydrophilic Polyaza-heterocycles

Authors: RB Gujar; AS Kanekar; A Bhattacharyya; NS Karthikeyan; C Ravichandran; SR Toleti; RJM Egbernik; J Juskens; W Verboom; PK Mohapatra

Year: 2024

Journal: Inorganic Chemistry

DOI: DOI: 10.1021/acs.inorgchem.4c01081

URL: <https://pubs.acs.org/doi/10.1021/acs.inorgchem.4c01081>

Reference ID: 20012.0

Title: UV-Vis-NIR absorption spectra of lanthanide oxides and fluorides

Authors: M Runowski; N Stopikowska; S Lis

Year: 2020

Journal: Dalton Transactions

DOI: DOI: 10.1039/C9DT04921E

URL: <https://xlink.rsc.org/?DOI=C9DT04921E>

Reference ID: 20014.0

Title: Thermodynamics of the solvent extraction of thorium and europium nitrates by neutral phosphorylated ligands

Authors: MR Yaftian; R Taheri; AA Zamani; D Matt

Year: 2004

Journal: Journal of Radioanalytical and Nuclear Chemistry

DOI: DOI: 10.1023/B:JRNC.0000046777.74156.6f

URL: <http://link.springer.com/10.1023/B:JRNC.0000046777.74156.6f>

Reference ID: 20015.0

Title: Extraction of actinides using N, N, N',N'-tetraoctyl diglycolamide (TODGA): a thermodynamic study

Authors: SA Ansari; PN Pathak; M Husain; AK Prasad; VS Parmar; VK Manchanda

Year: 2004

Journal: Radiochemica Acta

DOI: DOI: 10.1524/ract.2006.94.6.307

URL: <https://www.degruyter.com/document/doi/10.1524/ract.2006.94.6.307/html>

Reference ID: 20016.0

Title: Nitric Acid Extraction into a TODGA Solvent Modified with 1-Octanol

Authors: D Woodhead; F McLachlan; R Taylor; U Mullich; A Geist; A Wilden; G Modolo

Year: 2019

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2019.1625201

URL: <https://www.tandfonline.com/doi/full/10.1080/07366299.2019.1625201>

Reference ID: 20017.0

Title: A highly efficient solvent system containing TODGA in room temperature ionic liquids for actinide extraction

Authors: S Panja; PK Mohapatra; SC Tripathi; PM Gandhi; P Janardan

Year: 2012

Journal: Separation and Purification Technology

DOI: DOI: 10.1016/j.seppur.2012.06.015

URL: <https://linkinghub.elsevier.com/retrieve/pii/S1383586612003346>

Reference ID: 20018.0

Title: Bis-(1,2,4-triazin-3-yl) ligand structure driven selectivity reversal between Am³⁺ and Cm³⁺: solvent extraction and DFT studies

Authors: A Bhattacharyya; SA Ansari; NS Karthikeyan; C Ravichandran; B Venkatachalapathy; TS Rao; H Seshadri; PK Mohapatra

Year: 2021

Journal: Dalton Transactions

DOI: DOI: 10.1039/d1dt00307k

URL: <https://pubs.rsc.org/en/content/articlehtml/2021/dt/d1dt00307k>

Reference ID: 20019.0

Title: Solvent Extraction of Palladium(II) from Aqueous Chloride Medium by Triphenylphosphine, Triphenylphosphine Oxide or Triphenylphosphine Sulphide in Benzene

Authors: NE El-Hefny; JA Daoud

Year: 2013

Journal: Journal of Physical Science

DOI: DOI:

URL: <http://web.usm.my/jps/24-2-13/24-2-3.pdf>

Reference ID: 20020.0

Title: Selective Separation of Americium(III), Curium(III), and Lanthanide(III) by Aqueous and Organic Competitive Extraction

Authors: Q Wu ; H Hao; Y Liu ; LT Sha ; WJ Wang; WQ Shi; Z Wang; ZY Yan

Year: 2024

Journal: Inorganic Chemistry

DOI: DOI: 10.1021/acs.inorgchem.3c03331

URL: <https://pubs.acs.org/doi/full/10.1021/acs.inorgchem.3c03331>

Reference ID: 20021.0

Title: Ultra-Efficient Americium/Lanthanide Separation through Oxidation State Control

Authors: Z Wang; J-B Lu; X Dong; Q Yan; X Feng; H-S Hu; S Wang; J Chen; J Li; C Xu

Year: 2022

Journal: Journal of the American Chemical Society

DOI: DOI: 10.1021/jacs.2c00594

URL: <https://pubs.acs.org/doi/10.1021/jacs.2c00594>

Reference ID: 20022.0

Title: Selective Extraction of Uranium(VI) from Thorium(IV) Using New Unsymmetrical Acidic Phenanthroline Carboxamide Ligands

Authors: S Wang; X Yang; L Xu; Y Miao; X Yang; C Xiao

Year: 2023

Journal: Industrial & Engineering Chemistry Research

DOI: DOI: 10.1021/acs.iecr.3c02101

URL: <https://pubs.acs.org/doi/10.1021/acs.iecr.3c02101>

Reference ID: 20023.0

Title: Selective Separation of Am(III)/Eu(III) by the QL-DAPhen Ligand under High Acidity: Extraction, Spectroscopy, and Theoretical Calculations

Authors: S Wang; C Wang; X-F Yang; J-P Yu; W-Q Tao; S-L Yang; P Ren; L-Y Yuan; Z-F Chai; W-Q Shi

Year: 2021

Journal: Inorganic Chemistry

DOI: DOI: 10.1021/acs.inorgchem.1c02916

URL: <https://pubs.acs.org/doi/10.1021/acs.inorgchem.1c02916>

Reference ID: 20024.0

Title: A Simple yet Efficient Hydrophilic Phenanthroline-Based Ligand for Selective Am(III) Separation under High Acidity

Authors: D Tian; Y Liu; Y Kang; Y Zhao; P Li; C Xu; L Wang

Year: 2023

Journal: ACS Central Science

DOI: DOI: 10.1021/acscentsci.3c00504

URL: <https://pubs.acs.org/doi/10.1021/acscentsci.3c00504>

Reference ID: 20025.0

Title: Selective Complexation and Separation of Uranium(VI) from Thorium(IV) with New Tetradentate N,O-Hybrid Diamide Ligands: Synthesis, Extraction, Spectroscopy, and Crystallographic Studies

Authors: Y Wang; Y Yang; Y Wu; J Li; B Hu; Y Cai; L Yuan; W Feng

Year: 2023

Journal: Inorganic Chemistry

DOI: DOI: 10.1021/acs.inorgchem.2c04384

URL: <https://pubs.acs.org/doi/10.1021/acs.inorgchem.2c04384>

Reference ID: 20026.0

Title: Influence of uranyl complexation on the reaction kinetics of the dodecane radical cation with used nuclear fuel extraction ligands (TBP, DEHBA, and DEHiBA)

Authors: CC Barros; CD Pilgrim; AR Cook; SP Mezyk; TS Grimes; GP Horne

Year: 2021

Journal: Physical Chemistry Chemical Physics

DOI: DOI: 10.1039/D1CP03797H

URL: <https://xlink.rsc.org/?DOI=D1CP03797H>

Reference ID: 20027.0

Title: Extraction Behavior of Ln(III) Ions by T2EHDGA/nDodecane from Nitric Acid and Sodium Nitrate Solutions

Authors: E Campbell; VE Holfeltz; GB Hall; KL Nash; GJ Lumetta; TG Levitskaia

Year: 2018

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2018.1447261

URL: <https://www.tandfonline.com/doi/full/10.1080/07366299.2018.1447261>

Reference ID: 20028.0

Title: The Effect of Organic Diluent on the Extraction of Eu(III) by HEH[EHP]

Authors: T Lecrivain; A Kimberlin; DE Dodd; S Miller; I Hobbs; E Campbell; F Heller; J Lapka; M Huber; KL Nash

Year: 2019

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2019.1639371

URL: <https://www.tandfonline.com/doi/full/10.1080/07366299.2019.1639371>

Reference ID: 20029.0

Title: Synthesis and characterization of new unsymmetrical diglycolamide extractants for lanthanide ion partitioning: part one—straight-chain alkyl derivatives

Authors: BG Tokheim; SS Kelly; RC Ronald; KL Nash

Year: 2020

Journal: Journal of Radioanalytical and Nuclear Chemistry

DOI: DOI: 10.1007/s10967-020-07368-2

URL: <https://link.springer.com/10.1007/s10967-020-07368-2>

Reference ID: 20030.0

Title: Nitric Acid and Water Extraction by T2EHDGA in n-Dodecane

Authors: EL Campbell; VE Holfeltz; GB Hall; KL Nash; GJ Lumetta; TG Levitskaia

Year: 2017

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2017.1400161

URL: <https://www.tandfonline.com/doi/full/10.1080/07366299.2017.1400161>

Reference ID: 20031.0

Title: Characterization of Lanthanide Complexes with Bis-1,2,3-triazolebipyridine Ligands Involved in Actinide/Lanthanide Separation

Authors: JM Muller; SS Galley; TW Albrecht-Schmitt; KL Nash

Year: 2016

Journal: Inorganic Chemistry

DOI: DOI: 10.1021/acs.inorgchem.6b02005

URL: <https://pubs.acs.org/doi/10.1021/acs.inorgchem.6b02005>

Reference ID: 20032.0

Title: Isolation and Purification of Actinides Using N,O-Hybrid Donor Ligands for Closing the Nuclear Fuel Cycle

Authors: M Alyapyshev; V Babain; D Kirsanov

Year: 2022

Journal: Energies

DOI: DOI: 10.3390/en15197380

URL: <https://www.mdpi.com/1996-1073/15/19/7380>

Reference ID: 20033.0

Title: Development of Highly Selective Ligands for Separations of Actinides from Lanthanides in the Nuclear Fuel Cycle

Authors: FW Leis; MJ Hudson; LM Harwood

Year: 2011

Journal: Synlett

DOI: DOI: 10.1055/s-0030-1289557

URL: <http://www.thieme-connect.de/DOI/DOI?10.1055/s-0030-1289557>

Reference ID: 20034.0

Title: Ligands for f-element extraction used in the nuclear fuel cycle

Authors: A Leoncini; J Huskens; W Verboom

Year: 2017

Journal: Che. Soc. Rev.

DOI: DOI: 10.1039/C7CS00574A

URL: <https://xlink.rsc.org/?DOI=C7CS00574A>

Reference ID: 20035.0

Title: A novel highly selective ligand for separation of actinides and lanthanides in the nuclear fuel cycle. Experimental verification of the theoretical prediction

Authors: HV Lavrov; NA Ustynyuk; PI Matveev; IP Gloriov; SS Zhokhov

Year: 2017

Journal: Dalton Trans.

DOI: DOI: 10.1039/C7DT01009E

URL: <https://xlink.rsc.org/?DOI=C7DT01009E>

Reference ID: 20036.0

Title: Characterizing Diamylamylphosphonate (DAAP) as an Americium Ligand for Nuclear Fuel-Cycle Applications

Authors: BJ Mincher; NC Schmitt; RD Tollotson; G Elias; BM White; JD Law

Year: 2014

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2013.850288
<https://doi.org/10.1080/07366299.2013.850288>

Reference ID: 20037.0

Title: Insights into the Complexation Mechanism of a Promising Lipophilic PyTriLigand for Actinide Partitioning from Spent Nuclear Fuel

Authors: F Galluccio; E Macerta; P Webling; C Adam; E Mossini; W Panzeri; M Mariani; A Mele; A Geist; PJ Panak

Year: 2022

Journal: Inorganic Chemistry

DOI: DOI: 10.1021/acs.inorgchem.2c02332
URL: <https://pubs.acs.org/doi/10.1021/acs.inorgchem.2c02332>

Reference ID: 20038.0

Title: Hydrophilic Clicked 2,6-Bis-triazolyl-pyridines Endowed with High Actinide Selectivity and Radiochemical Stability: Toward a Closed Nuclear Fuel Cycle

Authors: E Macerta; E Mossini; S Scaravaggi; M Mariani; A Mele; W Panzeri; N Boubals; L Berthon; M-C Charbonnel; F Sansone; A Arduini; A Casnati

Year: 2016

Journal: J. Am. Chem. Soc.

DOI: DOI: 10.1021/jacs.6b03106

URL: <https://pubs.acs.org/doi/10.1021/jacs.6b03106>

Reference ID: 20039.0

Title: Amides and diamides as promising extractants in the back end of the nuclear fuel cycle: an overview

Authors: VK Manchanda; PN Pathak

Year: 2004

Journal: Separation and Purification Technology

DOI: DOI: 10.1016/j.seppur.2003.09.005

URL: <https://linkinghub.elsevier.com/retrieve/pii/S1383586603002569>

Reference ID: 20040.0

Title: Organophosphorus Extractants: A Critical Choice for Actinides/Lanthanides Separation in Nuclear Fuel Cycle

Authors: X Yang; L Xu; A Zhang; C Xiao

Year: 2023

Journal: Chemistry A European J

DOI: DOI: 10.1002/chem.202300456

URL: <https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/chem.202300456>

Reference ID: 20041.0

Title: Understanding the separation of trivalent lanthanides and actinides using multiple diglycolamide-containing ligands: a review

Authors: A Bhattacharyya; PK Mohapatra; W Verboom

Year: 2024

Journal: Radiochimica Acta

DOI: DOI: 10.1515/ract-2023-0264

URL: <https://www.degruyter.com/document/doi/10.1515/ract-2023-0264/html>

Reference ID: 20042.0

Title: Chemistry of Diglycolamides: Promising Extractants for Actinide Partitioning

Authors: SA Ansari; P Pathak; PK Mohapatra; VK Manchanda

Year: 2012

Journal: Chem. Rev.

DOI: DOI: 10.1021/cr200002f

URL: <https://pubs.acs.org/doi/10.1021/cr200002f>

Reference ID: 20043.0

Title: Applications of Diglycolamide Based Solvent Extraction Processes in Spent Nuclear Fuel Reprocessing, Part 1: TODGA

Authors: D Wittaker; A Geist; G Modolo; R Taylor; M Satsfield; A Wilden

Year: 2018

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2018.1464269

URL: <https://www.tandfonline.com/doi/full/10.1080/07366299.2018.1464269>

Reference ID: 20044.0

Title: Solvent extraction systems for mutual separation of Am(III) and Cm(III) from nitric acid solutions. A review of recent state-of-the-art

Authors: P Matveev; PK Mohapatra; SN Kalmykov; V Petrov

Year: 2021

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2020.1856998

URL: <https://www.tandfonline.com/doi/full/10.1080/07366299.2020.1856998>

Reference ID: 20045.0

Title: Elucidating the speciation of extracted lanthanides by diglycolamides

Authors: AA Peroutka; SS Galley; J Shafer

Year: 2023

Journal: Coordination Chemistry Reviews

DOI: DOI: 10.1016/j.ccr.2023.215071

URL: <https://linkinghub.elsevier.com/retrieve/pii/S0010854523000607>

Reference ID: 20046.0

Title: A COMPARATIVE STUDY OF DONOR PROPERTIES OF SULPHOXIDES AND PHOSPHINE OXIDES IN SOLVENT EXTRACTION

Authors: R Shanker; KS Venkateswarlu

Year: 1970

Journal: J. inorg,nucl.Chem

DOI: DOI: [https://doi.org/10.1016/0022-1902\(70\)80466-3](https://doi.org/10.1016/0022-1902(70)80466-3)

URL: <https://www.sciencedirect.com/science/article/pii/0022190270804663>

Reference ID: 20047.0

Title: Complexation thermodynamics of diglycolamide with f-elements: solvent extraction and density functional theory analysis

Authors: SM Ali; S Pahan; A Bhattacharyya; PK Mohapatra

Year: 2016

Journal: Physical Chemistry Chemical Physics

DOI: DOI: 10.1039/C6CP00825A

URL: <https://xlink.rsc.org/?DOI=C6CP00825A>

Reference ID: 20048.0

Title: An europium(III) diglycolamide complex: insights into the coordination chemistry of lanthanides in solvent extraction

Authors: MR Antonio; DR McAlister; EP Horwitz

Year: 2015

Journal: Dalton Trans.

DOI: DOI: 10.1039/C4DT01775G

URL: <https://xlink.rsc.org/?DOI=C4DT01775G>

Reference ID: 20049.0

Title: Selective Extraction of Am(III) from PUREX Raffinate: The AmSel System

Authors: C Wagner; U Müllich; A Geist; PJ Panak

Year: 2016

Journal: Solvent Extraction and Ion Exchange

DOI: DOI: 10.1080/07366299.2015.1129192

URL: <http://www.tandfonline.com/doi/full/10.1080/07366299.2015.1129192>

Reference ID: 20050.0

Title: Solvent extraction, separation and recovery of dysprosium (Dy) and neodymium (Nd) from aqueous solutions: Waste recycling strategies for permanent magnet processing

Authors: H-S Yoon; C-J Kim; K-W Chung; S-D Kim; J-Y Lee; JR Kumar

Year: 2016

Journal: Hydrometallurgy

DOI: DOI: 10.1016/j.hydromet.2016.01.028

URL: <https://linkinghub.elsevier.com/retrieve/pii/S0304386X16300287>
