

Rajesh Kumar Jyothi, PhD
Principal Researcher & Professor



Room number: 316, Future Earth Research (A1) Building
Convergence Research Center for Development of Mineral Resources (DMR)
Korea Institute of Geoscience and Mineral Resources (KIGAM)
124 Gwahak-ro, Yuseong-gu, Daejeon 34132, RO Korea (South)
Tel: 82-42-868-3313 (office), 82-42-861-4146 (home), Mobile: 82-10-5773-0975
e-mail: rkumarphd@kigam.re.kr / rajeshkumarphd@rediffmail.com

Education:

Ph.D	Chemistry (subject of research is hydrometallurgy)-degree awarded by Sri Venkateswara University, Tirupati 517 502, Andhra Pradesh, India and R & D work carried out at Indian Institute of Chemical Technology (IICT), CSIR, Hyderabad 500 007, Telangana, India	03/2005
M.Sc	Inorganic Chemistry degree awarded by Sri Venkateswara University, Tirupati 517 502, Andhra Pradesh, India	06/1999
B.Sc	Geology, Physics, Chemistry (GPC) , degree awarded by Sri Venkateswara University, Tirupati 517 502, Andhra Pradesh, India	06/1996

Research Areas:

- ✓ Resources to Materials via Environmental Management
- ✓ Sustainable Secondary Resources Innovation
- ✓ Hydrometallurgy & Urban Mining
- ✓ Clean Energy Technology Applications & Sustainable Energy Solutions
- ✓ Establish Policy for Resources Recovery & Recycling
- ✓ Inorganic, Analytical, Industrial & Applied Chemistry

Professional Experience:

Professor (Concurrent position), Employee Number: 21999, University Science and Technology (UST), “National Research Institutes-based Graduate University in Korea” (www.ust.ac.kr), Daejeon 34113, South Korea.	From 09/2018 – present
Principal Researcher, Employee Number: 1949, Korea Institute of Geoscience and Mineral Resources (KIGAM), (www.kigam.re.kr), Daejeon 34132, South Korea.	From 07/2015 - present
Associate Professor, Employee Number: 21999, UST, (www.ust.ac.kr), Daejeon 34113, South Korea.	From 03/2012 to 08/2018
Senior Researcher, Employee Number: 1949, KIGAM, Daejeon 34132, South Korea.	From 12/2009 to 06/2015
Postdoctoral Researcher, Employee Number: 7045, KIGAM, Daejeon 34132, South Korea.	From 05/2007 to 12/2009
Research Scientist, Analytical R & D at Sairam Organics Pvt Ltd (www.sairamorganics.com), Telangana, India.	From 07/2006 to 04/2007
CSIR-Senior Research Fellow, Sri Venkateswara University (SVU) (www.svuniversity.in), Tirupati 517 502, Andhra Pradesh, India.	From 04/2004 to 05/2006
CSIR-Project Assistant, Indian Institute of Chemical Technology (IICT) (www.iictindia.org), Hyderabad 500 007, Telangana, India.	From 08/2002 to 03/2004
Lecturer & Teacher (Part-time), Various colleges and coaching centers, Tirupati 517 502, Andhra Pradesh, India.	From 08/1999 to 01/2002

Awards and Honors:

- ① Received *Award* as a one of the team member for *Top 100 Excellence R & D Projects* from Ministry of Science & ICT, Govt. of Korea, 2017,
- ② Korean National News Channels MBC & YTN Science telecast about my career achievements in KIGAM, Korea, on June 14th & 15th 2016,
- ③ KIGAM monthly bulletin published article on my achievements under Creative People, 07-08/2016,
- ④ Received *Award* as a one of the team member for *Industrial Technology Transfer* from KIGAM, year 2014,
- ⑤ Received *Award of the Best Scientific and Technological Innovation* from WasteEng¹² Organizing Committee at Porto, Portugal, year 2012,
- ⑥ *First foreigner* to get selected as a permanent position at Korea Institute of Geoscience & Mineral Resources (KIGAM), Daejeon, Korea, year 2009,
- ⑦ Junior Scientist Award received from NESA (National environmental science academy), Delhi, India, year 2009,
- ⑧ *Post-doctoral fellowship* awarded by KIGAM, Daejeon, Korea, year 2007-09
- ⑨ *Senior Research Fellowship Award* received from CSIR, New Delhi, India, year 2004-06,
- ⑩ *Best Research Scholar Award* received from Sri Venkateswara University, Tirupati, India, year 2003,
- ⑪ Recognized as an *Outstanding Reviewer* by *ELSEVIER* Journals such as Hydrometallurgy, Minerals Engineering, Separation and Purification Technology, Journal of Cleaner Production, Waste Management, Journal of Industrial Engineering & Chemistry, Journal of Photochemistry & Photobiology, B: Biology.

Professional Associations:

Member:

- ① Canadian Institute of Mining, Metallurgy and Petroleum (CIM) (AM 705541)
- ② American Chemical Society (ACS), Washington D.C, USA (AM 30204118)
- ③ Royal Society of Chemistry (RSC), Cambridge, UK (e-M 475520525 & MRSC 510732)
- ④ The American Association for the Advancement of Science, "Triple A-S" (AAAS), USA (AM 40888071)
- ⑤ The Minerals, Metals & Materials Society (TMS), Warrendale, USA (AM 489534)
- ⑥ Brazilian Metallurgical, Materials and Mining Association - ABM, Brazil (AM 24053)
- ⑦ Korean Society for Geoscience & Engineering, Seoul, Korea (AM 1214)

Life member:

- ⑧ Korean Institute of Resources Recycling, Seoul, Korea (LM 476)
- ⑨ Chemical Research Society of India (CRSI), Bangalore, India (LM 1591)
- ⑩ Indian Institute of Metals (IIM), Kolkata, India (LM 49377)
- ⑪ Indian Institute of Mineral Engineers (IIME), Jamshedpur, India (LM 885)
- ⑫ Indian Society of Analytical Scientists (ISAS), Mumbai, India (LM 1801)
- ⑬ National Environment Science Academy (NESAs), Delhi, India (LM 1323)

Guest lectures at universities all over the world:

- ① Delivered lecture on *Secondary Resources to Industrial Materials Preparation via Environmental Management* at Environmental Engineering Department, Kwangwoon University, Seoul, Korea year 2019
- ② Delivered lecture on *Hydrometallurgy* at Dept. of Energy & Resources Engineering, Choonam National University, Gwangju, Korea, Nov 23rd 2017
- ③ Delivered lecture on "*Grand Opportunities and Challenges in Rare Earths Based Materials Recycling for Sustainable Developments*" at Dept. of Chemical Engineering National University of Singapore, 2016
- ④ Delivered lecture on *Hydrometallurgy* at Dept. of Energy & Resources Engineering, Choonam National University, Gwangju, Korea, Dec 1st 2016
- ⑤ Delivered guest lecture on *Mineral Processing and Metallurgy* at Dept. of Energy & Resources Engineering, Choonam National University, Gwangju, Korea, year 2015
- ⑥ Delivered Invited lecture on *Uranium Processing* at Dept. of Metals and Corrosion Engineering, Institute of Chemical Technology (ICT), Prague, Czech Republic, year 2012
- ⑦ Delivered *Invited lecture on Rare Earths Processing by Liquid-Liquid Extraction* at Environ. Eng. Dept. at Da-Yeh University, Taiwan, year 2011

Plenary talk:

- ① Delivered plenary talk on “*Secondary Resources to Sustainable Resources Innovations*” at The 12th International Conference on Multi-functional Materials Applications, Inha University, Incheon, Korea, November 22-25, 2018

Keynote talk:

- ① Delivered a keynote talk on “*Secondary Resources Innovations*” The 12th International Symposium on East Asia Resources Recycling Technology (EARTH 2019), at Alpensia Resort Center, Pyeongchang, Gangwon-do, South Korea on 1th-17th Oct 2019

Invited talks:

- ① Delivered invited talk on “*Environmentally friendly technology development for rare earths recovery from permanent magnets scraps: sustainable clean energy applications*” at International Virtual Conference on “Advanced Materials for Energy and Environmental Applications (ICAMEEA-2020)” during 26 and 27 June 2020 conducted by Nanotechnology and catalysis research Center, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India Co-sponsored by University of Malaya and Materials Research Society of India.
- ② Delivered a invited talk on “*Critical Rare Earths Recovery for Clean Energy Technology Applications*” at The 13th International Conference on Multi-Functional Materials and Applications (ICMMA 2019), Bengbu University, China, 2019
- ③ Delivered Invited Talk on “*Secondary Resources to Sustainable Materials Production*” at 3rd International Conference on Emerging Advanced Nanomaterials Newcastle City, Australia, Oct 30th to Nov 2nd 2018
- ④ Delivered Invited Talk on “*Resource Recovery from Mining Tailings: Hydrometallurgy Role in Metal Recovery Processing*” at 6th International Symposium on Mine Reclamation held from 08 to 09 November 2018 in MIRECO, Kangwon Land, Korea
- ⑤ Delivered Invited Talk on “*Rare earths recovery from permanent magnets scraps by hydrometallurgical methods*” at International Conference on Science, Technology and Applications of Rare Earths (ICSTAR-2018), Tirupati City, India, Sep 23rd to 25th 2018
- ⑥ Delivered invited talk on “*Recovery of Rare Earths for Green Technology Applications: Grand Opportunities to Create Wealth from Waste*” at The 11th International Conference on Multi-functional Materials and Applications, Anhui Jianzhu University, Hefei City, China, Nov 16th to 18th 2017
- ⑦ Delivered invited talk on “*Separation and Recovery of Rare Earths for Sustainable Developments: By Environmentally Sound Solutions*” at The 10th International Conference on Multi-functional Materials and Applications, Khon Kaen University, Thailand, Dec 2nd 2016
- ⑧ Delivered invited talk on “*Future Prospects & Challenges in Recycling of Rare Earths Based Materials for Sustainable Energy Sources*” at International Seminar on Mineral Processing Technology (MPT 2016) at, TCS, Pune, year 2016
- ⑨ Delivered invited talk on “*Current Global Trends and Future Visions of Hydrometallurgical Technologies for Sustainable Development*” at 103rd Indian National Science Congress at University of Mysore, year 2016
- ⑩ Delivered Invited talk on “*Uranium Processing Technologies*” at 10th Korea-Japan International Symposium on Resources Recycling and Materials Science at DCC, Daejeon, Korea, year 2012

As an international subject expert for funding agencies:

- ① Swiss National Science Foundation (<http://www.snsf.ch>)
- ② FWO, Belgium Govt. Fellowships and Financing: Referee for Postdoctoral Fellowship Assignments (<http://www.fwo.be/en/>)
- ③ National Center of Science and Technology Evaluation, Ministry of Education and Science, Almaty, Republic of Kazakhstan (<http://www.ncste.kz/en>)

PhD thesis examiner:

- ① *Foreign examiner* for PhD thesis entitled “A novel analytical method development and validation for the quantification of residual solvents and impurities of pharmaceutical products using appropriate chromatographic techniques” submitted to KL University, Vaddeswaram, AP, India, year 2020
- ② *Foreign examiner* for PhD thesis entitled “*Study of Rheological Behavior of Hydrophobic Mineral Slurries (Coal Water Slurries)*” submitted to National Institute of Technology (NIT), Warangal, Telangana, India, year 2019
- ③ *Foreign examiner* for PhD thesis entitled “*Alternate Dissolution And Analytical Method For High Plutonium*”

Bearing MOx Fuel” submitted to The Gandhigram Rural Institute (Deemed to be University), Gandhigram, Tamil Nadu, India, year 2019

- ④ *Foreign examiner* for PhD thesis entitled “*Development and Characterization of Non-conventional Low Cost Adsorbents for the Removal of Diverse Pollutants from Wastewater*”, submitted to KL University, Vaddeswaram, AP, India, year 2019
- ⑤ *Foreign examiner* for PhD thesis entitled “*Effective Removal of Diverse Pollutants from Wastewater Adopting Non-conventional Bio-sorbents*” submitted to KL University, Vaddeswaram, AP, India, year 2019
- ⑥ *One of the committee member & examiner* for PhD thesis entitled “*Process Design for Recovery of Vanadium and Tungsten from spent V₂O₅-WO₃/TiO₂ Catalyst*” submitted to Korea University Science & Technology, Daejeon, Korea, year 2018
- ⑦ *Foreign examiner* for PhD thesis entitled “*Process interventions to enhance kitchen refuse biogasification with reference to microbiology – An environmental probiotic approach*” submitted to KIIT University, Bhubaneswar, India, year 2016
- ⑧ *Foreign examiner* for PhD thesis entitled “*Studies on the combined viable techniques to treat heavy metals contaminated industrial wastewaters under standardized laboratory conditions*” submitted to KIIT University, Bhubaneswar, India, year 2015
- ⑨ *One of the committee member & examiner* for PhD thesis entitled “*Recovery of metal values from spent petroleum catalysts using hydrometallurgical techniques*” submitted to Korea University Science & Technology, Daejeon, Korea, year 2014

Editorial board member:

- ① *Journal of the Korean Institute of Resources Recycling*, KIRR, Korea, ISSN: 1225-8326, 2012-2016
- ② *Sustainability*, ISSN 2071-1050; CODEN: SUSTDE, (<https://www.mdpi.com/journal/sustainability/editors>)
- ③ *Challenges*, ISSN 2078-1547: <https://www.mdpi.com/journal/challenges/editors>
- ④ *Guest Editor* for Special Issue on “*Sustainable Development and Recycling of Rare Earth Resources*”, MDPI Publishers, Switzerland (https://www.mdpi.com/journal/sustainability/special_issues/Rare_Earth_Resources)
- ⑤ *Book Editor* for NOVA Publishers USA (<https://novapublishers.com/writer/jyothi-rajesh-kumar/>), VDM Publishers Germany & Springer Nature, USA
- ⑥ *Assistant Editor* in Chemistry, De Gruyter Open, Poland, 2012-13
- ⑦ *Current Catalysis*, ISSN: 2211-5447, BENTHAM SCIENCE (<https://benthamscience.com/journals/current-catalysis/editorial-board/>)

As a Reviewer for reputed international journals:

- ① *Chemical Reviews* (American Chemical Society) IF 52.758,
- ② *Environmental Science & Technology* (American Chemical Society) IF 7.864,
- ③ *Scientific Reports* (Nature Group) IF 3.998,
- ④ *Green Chemistry* (RSC) IF 9.405,
- ⑤ *Journal of Hazardous Materials* (Elsevier) IF 9.038,
- ⑥ *Journal of Cleaner Production* (Elsevier) IF 7.246,
- ⑦ *Analytical and Bioanalytical Chemistry* (Springer) IF 3.637,
- ⑧ *Sensors and Actuators B* (Elsevier) IF 7.1,
- ⑨ *Talanta* (Elsevier) IF 5.338,
- ⑩ *Food Chemistry* (Elsevier) IF 6.306,
- ⑪ *Waste Management* (Elsevier) IF 5.448,
- ⑫ *Separation and Purification Technology* (Elsevier) IF 5.774,
- ⑬ *Resources, Conservation and Recycling* (Elsevier) IF 8.086,
- ⑭ *Hydrometallurgy* (Elsevier) IF 3.338,
- ⑮ *Minerals Engineering* (Elsevier) IF 3.795,
- 16 *International Journal of Mineral Processing* (Elsevier) IF 3.795,
- 17 *Metals* (MDPI Publishers) IF 2.117,
- 18 *Minerals* (MDPI Publishers) IF 2.250,
- 19 *Materials* (MDPI Publishers) IF 3.057,

20 Geosciences (MDPI Publishers),
21 Sustainability (MDPI Publishers) IF 2.576,
22 Mineral Processing and Extractive Metallurgy Review (Taylor & Francis),
23 Journal of Rare Earths (Elsevier) IF 3.104,
24 Sustainable Materials and Technologies (Elsevier) IF 4.375,
25 Waste Management & Research (SAGE Publishers) IF 1.114,
26 Journal of Material Cycles and Waste Management (Springer) IF 2.193,
27 Waste and Biomass Valorization (Springer) IF 2.3,
28 Journal of Coordination Chemistry (Taylor & Francis) IF 1.41,
29 Industrial Engineering and Chemistry Research (American Chemical Society) IF 3.573,
30 Journal of Molecular Liquids (Elsevier) IF 5.065,
31 Journal of Radioanalytical and Nuclear Chemistry (Springer) IF 1.137,
32 International Journal of Environmental Analytical Chemistry (Taylor & Francis) IF 1.431,
33 Journal of Cluster Science (Springer) IF 1.731,
34 Environmental Technology (Taylor & Francis) IF 2.213,
35 The Korean Journal of Chemical Engineering (Korean Chemical Engineering Society) IF 2.241,
36 Desalination and Water Treatment (Taylor & Francis) IF 1.234,
37 Journal of Photochemistry and Photobiology (Elsevier) IF 3.306,
38 Arabian Journal of Chemistry (Elsevier) IF 4.762,
39 Engineering (Elsevier) IF 6.495,
40 Green Chemistry Letters and Reviews (Taylor & Francis) IF 3.286,
41 Analytical Chemistry Letters (Taylor & Francis),
42 Journal of Environmental Management (Elsevier) IF 5.647,
43 *International Journal of Environmental Research and Public Health (MDPI)* IF 2.849,
44 Detritus Journal-Multidisciplinary Journal for Waste Resource & Residues (iwwg),
45 Journal of Environmental Protection (Scientific Research),
46 International Journal of Minerals, Metallurgy and Materials (Springer),
47 ACS Omega (American Chemical Society) IF 2.870,
48 ACS Sustainable Chemistry & Engineering (American Chemical Society) IF 7.637,
49 FlatChem (Elsevier),
50 Microelectronics Reliability (Elsevier) IF 1.535,
51 Journal of the Iranian Chemical Society (Springer) IF 1.552,
52 International Journal of Mining Science and Technology (Elsevier) IF 3.903,
53 Materials Science & Engineering (Elsevier) IF 4.652,
54 Journal of Electronic Materials (Elsevier) IF 1.774,
55 SN Applied Science (Springer Nature),
56 Helion (Elsevier),
57 Frontiers of Environmental Science and Engineering (Springer) IF 4.053,
58 ChemistrySelect (Wiley) IF 1.7,
59 Process Safety Environmental Protection (Elsevier),
60 Colloids and Surfaces A: Physicochemical and Engineering Aspects (Elsevier) IF 3.99,
61 Geoderma (Elsevier) IF 3.85,
62 Archives of Civil and Mechanical Engineering (Elsevier),
63 Progress in Nuclear Energy (Elsevier),
64 Chemical Engineering and Processing - Process Intensification (Elsevier),
65 Applied Catalysis B: Environmental (Elsevier) IF 16.683,
66 Materials Research Society of Korea,
67 Indian Journal of Chemistry: Section A (CSIR-NISCAIR Publishers),
68 Environmental Progress and Sustainable Energy (Wiley).

Committee member & session chairman for national and international conferences:

- ① Committee Board Member for The 13th International Conference on Multi-Functional Materials and Applications (ICMMA 2019), Bengbub University, China, 2019
- ② *Chaired the session* at EARTH 2019, Pyeongchang, Gangwon-do, Korea, year 2019
- ③ Session chair at The 12th International Symposium on East Asia Resources Recycling Technology (EARTH 2019), at Alpensia Resort Center, Pyeongchang, Gangwon-do, South Korea on 1th-17th Oct 2019
- ④ Session chair at The 11th International Conference on Multi-functional Materials and Applications, Anhui Jianzhu University, Hefei City, China, Nov 16th to 18th 2017
- ⑤ Organizing committee member of 3rd World Conference on Applied Science, Engineering and Technology (WCAST), Singapore, June 29-30, 2017
- ⑥ Served as Chairman and Editor as well as Technical Program Committee member for The 2nd International Conference on Residuals Science and Environment (ICRSE 2015) will be held from July 17 to 19, 2015, in Beijing, China
- ⑦ Acted as *International Advisory Committee Member* for International Conference on Processing of Lean Grade and Urban Ores (IC-LGO 2015) at NML, Jamshedpur, India schedule at Jan 20-22 2015
- ⑧ Acted as *Advisory Committee Member* for 26th National Convention of Metallurgical and Materials Engineers & National Seminar on Exploration of lean grade ore, ore fines and urban ores: Challenges, Problems and Solutions at CSIR-NML, Jamshedpur organized by The Institution of Engineers (India), 2013
- ⑨ Acted as *International Advisory Committee Member* for International Seminar on Emerging trends in Synthetic Organic & Medicinal Chemistry at Vikrama Simhapuri University, Nellore, AP, India, 2013
- ⑩ *Chaired the session at 10th Korea-Japan International Symposium on Resources Recycling and Materials Science at DCC, Daejeon, Korea, year 2012*
- ⑪ *Chaired the session at EARTH 2011, Kaohsiung City, Taiwan, year 2011*

Visits abroad:

- ① **2020-USA** (Oral Presentation at TMS 2020, San Diego)
- ② **2019-China** (Delivered a invited talk at ICMMA 2019, Bengbub University)
- ③ **2018-Canada** (Oral Presentation at EXTRACTION 2018, Ottawa City)
- ④ **2018-Australia** (Invited Talk at 3rd International Conference on Emerging Advanced Nanomaterials Newcastle City)
- ⑤ **2018-China** (Invited talk at Korea-China International Workshop on Mining Management, Chenhong City)
- ⑥ **2017- Canada** (Oral & Poster presentation at COM, 2017, Vancouver City)
- ⑦ **2017-China** (Invited talk at ICMMA 2017, Hefei City, Nov 2017)
- ⑧ **2016- Canada** (Oral presentation at IMPC 2016, Quebec City)
- ⑨ **2016-Singapore** (Given seminar at National University of Singapore on 8th Jan 2016)
- ⑩ **2016-Thailand** (Delivered invited lecture at ICMMA, Khon Kaen University, 2nd Dec 2016)
- ⑪ **2016-China** (Participated in 1st International Forum for Academic Youths and Elites, Guangzhou University)
- ⑫ **2015-Canada** (Oral presentation at The Lucy Rosato Memorial Symposium on Sustainable Hydrometallurgical Processing on August 22-26, 2015 at The Fairmont Royal York Hotel, Toronto)
- ⑬ **2015-Thailand** (Oral presentation at EARTH 2015 at Chulalongkorn University, Pattaya)
- ⑭ **2014-Canada** (Oral presentation at Hydrometallurgy-2014 International Symposium, Industrial Tour to Tech Metals, Trail and visit to Department of Materials Engineering, University of British Columbia)
- ⑮ **2012-Portugal** (Research Paper Presentation at WasteEng¹², Porto City)
- 16 **2012-Czech Republic** (visited and delivered a talk at ICT, Prague City)
- 17 **2011-Taiwan** (Paper Presentation at EARTH-2011, Kaohsiung City and visited Da-Yeh University, Changua)
- 18 **2011-Germany** (visited RUHR University, RWTH University & Delivered a talk at EMC-2011 Dusseldorf)
- 19 **2010-China** (delivered a talk at ICSST, Changsha City)
- 20 **2007-South Korea** (Post-Doc and current position at KIGAM, Daejeon)
- 21 **2006-Japan** (visited as a Invited Researcher to Dept. of Chemical Engineering Gunma University, Kiryu)
- 22 **2005-USA** (visited to Dept. of Chemistry, State University of New York at Binghamton, New York)

Workshops & training courses attended:

- ① Completed training course on “Pyrometallurgy of Ti and W” at KIGAM, on November 2nd to 3rd 2016, Daejeon, Korea
- ② Attended World Nuclear University workshop on “Key issues in the world nuclear industry today” at Seoul, Korea on 13th to 15th July 2015
- ③ Attended Public Customized Training Course on “Solvent extraction: a key technique for innovation in production of metals and their recycling” at KIGAM, on March 24th to 26th 2015, Daejeon, Korea
- ④ Attended workshop on “Industrial Ecology” at KIGAM, on March 18th to 19th 2015, Daejeon, Korea
- ⑤ Completed a training course from global field expert on “Mineral Processing & Hydro-metallurgical Plants”, at Chonnam National University on Jan 26th to 28th 2015, Gwangju, Korea
- ⑥ Attended Public Customized Training Course on “Geo-metallurgy and Advanced Characterization of Iron Ores” at KIGAM, on Sep 14th to 15th 2014, Daejeon, Korea
- ⑦ Attended Public Customized Training Course on “Hydrometallurgy-Leaching” at KIGAM, on Feb 11th 2014, Daejeon, Korea
- ⑧ Attended training course on Process Mineralogy for the Mining Industry at KIGAM, on March 12th to 13th, 2013, Daejeon, Korea
- ⑨ International Workshop on Nanoporous Materials at KAIST, on 2nd-3rd March 2012, Daejeon, Korea
- ⑩ Work shop & short course on Solvent Extraction Process principles, Process Development, Application: ores, spent batteries/catalysts, at KIGAM, on 12th to 13th April 2010, Daejeon, Korea,
- ⑪ KIGAM-CSIRO Workshop on Process Evaluation, April 29-30th, 2008, Daejeon, Korea
- ⑫ Frontier Lectures in Chemistry, Organized by Jawaharlal Nehru Centre for Advance Research, Bangalore, November 16-19th, 1997, Tirupati, India

Courses designed and developed for graduate (PhD for Resources Recycling) students:

- ① Recycling of the metals by environmentally friendly routes
- ② Hydrometallurgy: Aqueous processing of Metals
- ③ Resources Recovery from Process Wastes: Environmental Management
- ④ Sustainable Recycling for Mitigating Climate Change

Industrial technology transfer (as one of the team member):

- ① Recovery of rare metals(V, W) from the spent deNOx catalyst and materialization for the catalyst
- ② Recovery of rare earth metal from spent magnet

Details of R & D Projects:

S.No	Title of the project	Funding agency	Duration & Budget	Role
1)	Development of environmentally sound copper production process with zero emission of SOx gas refining process for the production of high purity copper metal and commercialization technologies (KIGAM 20-9809)	National R & D Project, Ministry of Trade Industry and Energy, Seoul, Republic of Korea	2020-2024 705,000,000 KWN (On-going) [~\$583,309]	Major Member
2)	Comminution of waste HDD (KIGAM 20-9894)	Global Environmental Top Technology Development Project, Sponsored by Ministry of Environment, Korea	2020-2022 200,000,000 KWN (On-going) [~\$168,113]	Major Member
3)	Development of process for recovery and preparation of high purity valuable metal from tungsten	Global Environmental Top Technology Development	2019-20 300,000,000 KWN (On-going) [~\$253,967]	Major Member

	soft scrap by alkali fusion (KIGAM 19-9895)	Project, Sponsored by Ministry of Environment, Korea		
4)	Development of technology for practical application with rare-earth mineral resources of North Korea (KIGAM 18-8904)	Ministry of Science, ICT and Future Planning, Seoul, Republic of Korea	2015-18 2,910,000,000 KWN (On-going) [~\$ 2.516 million]	Major Member
5)	Development eco-friendly process for rare earth separation refining and management technology for cost reduction (KIGAM 16-9418, 16-4822)	Ministry of Science, ICT and Future Planning, Seoul, Republic of Korea	2015-18 558,000,000 KWN (Completed) [~\$ 0.513 million]	Major Member
6)	Development of advanced mineral and metallurgical processing for strategic mineral resources in Korean Peninsula (KIGAM 15-8902, 16-3902)	Ministry of Science, ICT and Future Planning, Seoul, Republic of Korea	2015-18 4,200,000,000 KWN (Completed) [~\$ 3.863 million]	Major Member
7)	Efficiency evaluation for recovery of vanadium from Ockcheon black shale minerals (KIGAM 18-5802)	Industry Sponsored Project	2018-19 72,727,273 KWN (Completed) [~\$64,472]	Major Member
8)	Global Convergence Cluster: Waste Recycling Treatment Technology (KIGAM 15-8602, 16-8702)	Ministry of Science, ICT and Future Planning, Seoul, Republic of Korea	2015-17 160,000,000 KWN (Completed) [~\$ 0.147 million]	Major Member
9)	Separation and purification of Rare Earth Elements and Non-Rare Earth Elements (KIGAM 16-9421, 16-9418, 18-9893)	Ministry of Environment, Seoul, Republic of Korea	2016-19 730,000,000 KWN (Completed) [~\$ 0.671 million]	Major Member
10)	Development of commercial process and export package system for recovering valuable metals from spent catalysts (KIGAM 16-9411, 17-9874, 18-9874)	Ministry of Environment, Seoul, Republic of Korea	2016-19 2,870,000,000 KWN (Completed) [~\$ 2.639 million]	Major Member
11)	Refinement of coal ash and stabilization of heavy metals of inorganic wastes for CO ₂ solidification technology commercialization (KIGAM 14-4819, 15-4819, 16-4819, 17-4819)	Ministry of Industry, Seoul, Republic of Korea	2014-19 580,000,000 KWN (Completed) [~\$ 0.533 million]	Major Member
12)	Recovery of rare earth metal from spent magnet (KIGAM 13-9414)	Ministry of Environment, Seoul, Republic of Korea	2011-17 2,700,000,000 KWN (Completed) [~\$ 2.483 million]	Major Member
13)	Recovery of rare metals(V, W) from the spent deNO _x catalyst and materialization for the catalyst (KIGAM 11-9411, 12-9411, 15-	Ministry of Environment, Seoul, Republic of Korea	2011-16 300,000,000 KWN (Completed) [~\$ 0.275 million]	Major Member

9411)

14)	Recovery of valuable metals(Cu, Ni, Co) from low-grade copper ore (KIGAM 15-3243)	Ministry of Science, ICT and Future Planning, Seoul, Republic of Korea	2015-16 3,587,754,000 KWN (Completed) [~\$ 3.3 million]	Major Member
15)	Development of advanced metallurgical process by melting-reduction method for low grade metallic minerals (KIGAM 12-3111, 13-3111-1)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2012-14 3,747,504,000 KWN (Completed) [~\$ 3.447 million]	Major Member
16)	Preparation of purified rare-earth compounds from the domestic rare-earth ore (KIGAM 11-8101, 12-8101, 14-8101)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2011-14 740,000,000 KWN (Completed) [~\$ 0.68 million]	Major Member
17)	High value-addition of by-product with Li-recovery process (KIGAM 10-4417, 11-4417, 12-4417)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2010-13 420,000,000 KWN (Completed) [~\$ 0.386 million]	Major Member
18)	Studies on solvent extraction processing of the PGM's and green solvents role (KIGAM 13-7603)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2013-14 30,000,000 KWN (Completed) [~\$ 27,591]	Project Manager
19)	Physical and Chemical mineral dressing/refining of low grade uranium ore (KIGAM 10-4415, 11-4415, 12-4415)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2010-13 2040,000,000 KWN (Completed) [~\$ 1.876 million]	Major Member
20)	Development of advanced beneficiation and metallurgy techniques for utilization of domestic rare earth minerals (KIGAM 10-4414, 11-4414)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2010-11 2610,000,000 KWN (Completed) [~\$ 2.4 million]	Major Member
21)	Development of valuable metal recovery technology from Hong-Cheon Deposit (KIGAM 10-3217, 11-3217)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2010-11 2398,662,000 KWN (Completed) [~\$ 2.206 million]	Major Member
22)	Total cycle technical development for securing of domestic and overseas uranium resources (KIGAM 10-3211, 11-3211)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2009-11 2368,662,000 KWN (Completed) [~\$ 2.178 million USD]	Major Member
23)	Development of fusion technology for manufacturing higher value-added products from precious metal resources (KIGAM JP 2007-008-03)	Ministry of Knowledge and Economy, Seoul, Republic of Korea	2007-09 8640,526,000 KWN (Completed) [~\$7.947 million]	Project staff
24)	Studies on Liquid-Liquid Extraction of Zirconium and Hafnium (9/152(261)/2K4-EMR)	CSIR, GOI, New Delhi, India	2004-06 ~3.8 Lacks INR (Completed)	CSIR-SRF Project

25)	Technology development for the recovery of nickel and cadmium values from spent nickel-cadmium batteries using an environmentally friendly hydrometallurgical route (19-125/99-RE)	Ministry of Environment & Forests, GOI, New Delhi, India	2002-04 ~7.7 Lacks INR (Completed)	Project staff
-----	--	--	--	---------------

JCR Ranking & Impact Factors of Journals:

Name of the Journal	ISSN Number	IF, 2019	Publishers	JCR World Ranking
1) Journal of Nuclear Materials	0022-3115	2.485	Elsevier	2/34, Q1
2) Journal of Agricultural and Food Chemistry	0021-8561	4.192	American Chemical Society	4/58, Q1
3) Minerals Engineering	0892-6875	3.795	Elsevier	4/21, Q1
4) Food Chemistry	0308-8146	6.306	Elsevier	7/135, Q1
5) Journal of Hazardous Materials	0304-3894	9.038	Elsevier	8/265, Q1
6) Separation and Purification Reviews	1542-2119	5.324	Taylor & Francis	9/71, Q1
7) Hydrometallurgy	0304-386X	3.338	Elsevier	13/79, Q1
8) Separation and Purification Technology	1383-5866	5.774	Elsevier	16/143, Q1
9) Scientific Reports	2045-2322	3.998	Nature	17/71, Q1
10) Journal of Cleaner Production	0959-6526	7.246	Elsevier	19/265, Q1
11) Journal of Industrial and Engineering Chemistry	1226-086X	5.278	Elsevier	21/143, Q1
12) Journal of Environmental Management	0301-4797	5.647	Elsevier	37/251, Q1
13) Canadian Metallurgical Quarterly	0008-4433	1.456	Taylor & Francis	37/79, Q2
14) Food Analytical Methods	1936-9751	2.667	Springer	49/139, Q2
15) RSC Advances	2046-2069	3.119	Royal Society of Chemistry (RSC)	73/177, Q2
16) Journal of Chemical Technology and Biotechnology	0268-2575	2.750	Wiley Inter Science	84/177, Q2
17) ACS Omega	2470-1343	2.870	American Chemical Society	81/177, Q2
18) Journal of Trace Elements in Medicine and Biology	0946-672X	3.245	Elsevier	145/297, Q2
19) Journal of Radioanalytical and Nuclear Chemistry	0236-5731	1.137	Springer	21/34, Q3
20) Korean Journal of Metals and Materials	1738-8228	1.146	Korean Institute of Metals and Materials	50/79, Q3
21) Analytical Sciences	0910-6340	2.049	The Japan Society for Analytical Chemistry	49/86, Q3
22) Periodica Polytechnica Chemical Engineering	0324-5853	1.257	Budapest University of Technology and Economics	99/143, Q3
23) Solvent Extraction and Ion Exchange	0736-6299	1.988	Taylor & Francis	100/172, Q3
24) Solvent Extraction Research and Development, Japan	1341-7215	1.179	Japan Association of Solvent Extraction	103/143, Q3
25) Separation Science and Technology	0149-6395	1.718	Taylor & Francis	105/177, Q3
26) Journal of the Brazilian Chemical Society	0103-5053	1.399	SOC BRASILEIRA QUIMICA, Brazil	126/177, Q3
27) Monatshefte für Chemie - Chemical Monthly	0026-9247	1.349	Springer	112/172, Q3
28) Environmental Monitoring and Assessment	0167-6369	1.903	Springer	142/251, Q3
29) Materials Transactions	1345-9678	0.731	The Japan Institute of Metals	62/79, Q4
30) Analytical Letters	0003-2719	1.467	Taylor & Francis	67/86, Q4
31) Journal of the Chinese Chemical Society	0009-4536	0.667	WILEY-VCH VERLAG GMBH	81/91, Q4
32) Desalination and Water Treatment	1944-3994	0.854	Taylor & Francis	84/94, Q4
33) Brazilian Journal of Chemical engineering	0104-6632	1.027	BRAZILIAN SOC CHEMICAL ENG	112/143, Q4

34) Journal of the Korean Institute of Resources Recycling	1225-8326	--	Korean Society of Resources Recycling	--
35) Journal of Metallurgy and Materials Science	0972-4257	--	CSIR-NML, India Publishers	--
36) Korean Chemical Engineering Research	0304-128X	--	Korean Institute of Chemical Engineers	--

Citations:

- 1) 1825 citations as on August 11, 2020 & *h* index 23 (Data provided by: Scopus), Author ID: 57216781429
- 2) 2298 citations as on August 11, 2020 & *h*-index 27, i10-index 56 (Data Provided by [Google Scholar](#))

ORCID ID: <https://orcid.org/0000-0001-8106-795X>

Research publications

I. Reference Books

- 1) Clean Coal Technologies, Springer, a part of Springer Nature by P. K. Parhi and **R. K. Jyothi***, 2020 (Under writing)
- 2) Rare-Earth Metal Recovery for Green Technologies: Methods & Applications, Springer, a part of Springer Nature (ISBN: 978-3-030-38105-9) by **R. K. Jyothi**, 2020.
- 3) Mineral Processing: Methods, Applications and Technology, NOVA Science Publishers, USA, (ISBN: 978-1-53612-892-5) by **J. R. Kumar**, 2017.
- 4) Liquid-Liquid Extraction of Tetravalent Platinum, Verlag Dr. Muller (VDM) Publishers, Germany (ISBN: 978-3-639-24889-0) by **J. R. Kumar***, J.Y. Lee, 2010.
- 5) Studies on Liquid-Liquid Extraction of Tetravalent Zirconium and Hafnium, Verlag Dr. Muller (VDM) Publishers, Germany (ISBN: 978-3-639-24635-3), by **J. R. Kumar**, 2010.

II. Book Chapters

- 1) Sustainable environmentally friendly approaches to the recycling of spent selective catalytic reduction (SCR) catalysts, A. B. C. Sola, J.-Y. Lee, R. K. Jyothi, at book on “Sustainable Nanotechnology for Environmental Remediation”, Edited by J. R. Koduru, R. R. Karri, N. M. Mubarak, E. R. Bandala, Elsevier, USA, 2020 (Under preparation)
- 2) Introduction of Rare-Earth Metal Recovery for Green and Clean Energy Technologies, A. B. C. Sola, P. K. Parhi, T. Thenepalli, **R. K. Jyothi** at book on “Rare-Earth Metal Recovery for Green Technologies: Methods and Applications”, Springer, a part of Springer Nature by **R. K. Jyothi**, 2020 (ISBN: 978-3-030-38105-9)

III. Patents

- 1) Method for leaching valuable metals contained in waste denitrification catalyst by using roasting and water leaching, Jin-Young Lee, Joon-Soo Kim, **Rajesh Kumar**, World Patent: WIPO WO 2014/038762 A1 sanctioned on Mar 13 2014, European Patent: EP 2-894-233-B1 sanctioned on April 04 2018, & US Patent: US10,017,839 B2 sanctioned on July 10 2018.
- 2) Method for recovering vanadium and tungsten from leach solution of waste denitrification catalysts, Jin-Young Lee, **Rajesh Kumar**, US Patent: US 2016/0376682 A1 sanctioned on Dec 29, 2016; KIPO 10-1452179-0000, (Korean Patent); CN 106164304, ZL 2015-8-0013012.0 dated on 2015-02-27 (China); MX/a/2016/011527 (Mexico) and 1-2016-03363 (Vietnam), filled, 2015-2016.
- 3) Selective stripping method of thorium using salt, Kyeong-Woo Chung, **Jyothi Rajesh Kumar**, Chul-Joo Kim, Ho-Sung Yoon, KIPO1019233850000, 2018-11-29

- 4) Selective extraction method of thorium using polymer alcohol and making method of thorium oxide, Kyeong-Woo Chung, **Jyothi Rajesh Kumar**, Chul-Joo Kim, Ho-Sung Yoon, KIPO 10-1923384-0000, 2018-11-29.
- 5) Method for selective extraction of thorium, Kyeong-Woo Chung, **Jyothi Rajesh Kumar**, Jin-Young Lee, Ho-Sung Yoon, KIPO1017279780000, 2017-04-19
- 6) Sequential recovery method of uranium and vanadium separation from black shale ore, Joon-Soo Kim, **Jyothi Rajesh Kumar**, Sung-Don Kim, Hoo-In Lee, JinYoung Lee, KIPO 10-1303959-0000, (South Korean Patent), 2013-09-05.
- 7) Recovery method of uranium and vanadium from black shale ore, Joon-Soo Kim, Hoo-In Lee, Jin-Young Lee, Kyeong-Woo Chung, **Jyothi Rajesh Kumar**, Hyung-Kyu Park, KIPO 10-1290151-0000 (South Korean Patent), 2013-08-07.
- 8) The valuable metal leaching method contained in denitrification spent catalyst using the roasting and number leaching, by Jin-Young Lee, Joon-Soo Kim, **Jyothi Rajesh Kumar**, KIPO 10-1281579-0000 (South Korean Patent), 2013-07-03.
- 9) Selective method of recovering valuable metal from waste catalyst of desulfurization with excellent recovery and separation efficiency, Jin-Young Lee, Joon-Soo Kim, **Jyothi Rajesh Kumar**, Min-Seuk Kim, KIPO 10-1187301-0000 (South Korean Patent), 2012-10-02

IV. Review Articles

- 1) Review of rare earth elements recovery from secondary resources for clean energy technologies: Grand opportunities to create wealth from waste by saving energy, **R. K. Jyothi***, T. Thenepalli, J.W. Ahn, P. K. Parhi, K. W. Chung, J.-Y. Lee, *Journal of Cleaner Production*, 267 (2020) 122048.
- 2) Solvent extraction, separation and recovery of the dysprosium (Dy) and neodymium (Nd) from aqueous solutions: Waste recycling strategies for permanent magnet processing, H.S. Yoon, C. J. Kim, K. W. Chung S. D. Kim, J. Y. Lee, **J. R. Kumar***, *Hydrometallurgy*, 165 (2016) 27-43.
- 3) Review on hydrometallurgical recovery of rare earth metals, M. K. Jha*, A. Kumari, R. Panda, **J. R. Kumar**, K. Yoo, J. Y. Lee, *Hydrometallurgy*, 165 (2016) 2-26.
- 4) Rare earths extraction, separation and recovery from phosphoric acid media, B. R. Reddy*, **J. R. Kumar**, *Solvent Extraction & Ion Exchange*, 34 (2016) 226-240.
- 5) Process development to recover rare earth metals from monazite mineral: A review, A. Kumari, R. Panda, M. K. Jha*, **J. R. Kumar**, J. Y. Lee*, *Minerals Engineering*, 79 (2015) 102-115.
- 6) A brief review on solvent extraction of uranium from acidic solutions, **J. R. Kumar**, J.S. Kim*, J.Y. Lee, H.S. Yoon, *Separation Purification Reviews*, 40 (2011)77-125.
- 7) Leaching methodologies for uranium, J. S. Kim, J.Y. Lee, **J. R. Kumar***, H.S. Yoon, *Journal of Metallurgy and Materials Science*, 52 (2010)1-17.
- 8) Liquid-liquid extraction of platinum from acidic solutions-A review, **J. R. Kumar**, J.Y. Lee, J.S. Kim*, J.S. Sohn, *Solvent Extraction Research and Development, Japan*, 16 (2009) 13-22.
- 9) Liquid-liquid extraction general principles-A review, J. Y. Lee*, **J. R. Kumar**, *Journal of the Korean Institute of Resources Recycling*, 18 (2009) 3-9.

V. Research Publications

- 10) Environmental friendly comprehensive hydrometallurgical method development for neodymium recovery from mixed rare earth aqueous solutions using organo-phosphorus derivatives, V. C. A. Ruiz, R. Kuchi, P. K. Parhi, J.-Y. Lee, **R. K. Jyothi***, Scientific Reports (Nature Publication), Revision, 2020
- 11) Separation of thorium and uranium from a Vietnamese xenotime leachate by continuous counter current extraction and scrubbing-stripping processes, N. T. Hung*, N. T. Thuy^a, L. B. Thuan, T. C. Thanh, M. Watanabe, D. V. Khoai, H. Nhuan, T. H. Mai, D. T. T. Tra, M. K. Jha, J.-Y. Lee, **R. K. Jyothi***, Hydrometallurgy, Revision 2020
- 12) Environmentally friendly approach to recover vanadium and tungsten from spent SCR catalyst leach liquors by Aliquat 336, A. B. C. Sola, P. K. Parhi, J.-Y. Lee*, H. N. Kang, **R. K. Jyothi***, RSC Advances, 10 (2020) 19736-19746.
- 13) Spent SCR Catalyst Leach Liquor Processed for Valuable Metals Extraction by Solvent Extraction Technique, A. B. C. Sola, J. H. Jeon, J.-Y. Lee, P. K. Parhi, **R. K. Jyothi***, *Journal of the Korean Institute of Resources Recycling*, 29 (2020) 55-61.
- 14) Recovery of the Vanadium and Tungsten from Spent SCR Catalyst Leach Solutions by Hydrometallurgical Methods, I.-H. Choi, G. Moon, J.-H. Jeon, J.-Y. Lee, **R. K. Jyothi***, *Journal of the Korean Institute of Resources Recycling*, 29 (2020) 62-68.
- 15) Microwave assisted leaching for the extraction of copper (II) and chromium (III) from spent catalyst, S. S. Behera, S. K. Panda, D. Das, R. K. Mohapatra, H. I. Kim, J. Y. Lee, **R. K. Jyothi**, P. K. Parhi*, *Separation & Purification Technology*, 244 (2020) 116842.
- 16) Separation, purification and recovery of thorium from Korean monazite leach liquors by counter-current extraction process, K. W. Chung, H. S. Yoon, C. J. Kim, **R. K. Jyothi**, *Journal of Radioanalytical & Nuclear Chemistry*, 83 (2020) 72-80.
- 17) Optimization of sulfuric acid leaching of a Vietnamese rare earth concentrate, N. T. Hung, Le. Ba. Thuan, T. C. Thanh, M. Watanabe, H. Nhuan, D. V. Khoai, N. T. Thuy, N. V. Tung, N. Aoyagi, D. T. T. Tra, N. T. Minh, M. K. Jha, J. Y. Lee, **R. K. Jyothi***, *Hydrometallurgy*, 191(2020) 105195.
- 18) Solvent extraction, separation and recovery of thorium from Korean monazite leach liquors for nuclear applications, K. W. Chung, H. S. Yoon, C. J. Kim, **R. K. Jyothi**, *Journal of Industrial Engineering & Chemistry*, 83 (2020) 72-80.
- 19) Stabilization and rheological behavior of fly ash–water slurry using a natural dispersant in pipeline transportation, D. Das, S. Pattanaik, P. K. Parhi, R. K. Mohapatra, **R. K. Jyothi**, J. Y. Lee, H. I. Kim, *ACS Omega*, 4 (2019) 21604-21611.
- 20) Alkali fusion using sodium carbonate for extraction of vanadium and tungsten for the preparation of synthetic sodium titanate from spent SCR catalyst, I.-H. Choi, G. Moon, J.-Y. Lee, **R. K. Jyothi***, *Scientific Reports (Nature Publication)*, 9:12316 (pp.1-8), 2019 (DOI: 10.1038/s41598-019-48767).
- 21) Advanced process to dephosphorize monazite for effective leaching of rare earth metals (REMs), A. Kumari, M. K. Jha*, K. Yoo, R. Panda, J. Y. Lee, **J. R. Kumar**, D. D. Pathak, *Hydrometallurgy*, 187 (2019) 203-211.
- 22) Diluents role in extraction and possible separation of light rare earth elements from chloride solutions by using Cyanex 272 used as an extractant, **R. K. Jyothi**, H. R. Kim, J. S. Kim, K. W. Chung, J. Y. Lee, *Korean Journal of Metals and Materials*, 56(2018) 763-771.
- 23) Extraction of tungsten and vanadium from spent SCR catalyst for stationary application by pressure leaching process, I. Choi, G. Moon, J. Y. Lee, **J. R. Kumar***, *Journal of Cleaner Production*, 197 (2018) 163-169.
- 24) Hydrometallurgical processing of spent SCR catalyst for recovery of tungsten, I. Choi, G. Moon, J. Y. Lee, **J. R. Kumar***, *Hydrometallurgy*, 178 (2018) 137-145.

- 25) Hydrometallurgical process development for extraction, separation and recovery of vanadium from spent desulfurization catalyst bio-leach liquors, H.I. Kim, G. Moon, I. Choi, J. Y. Lee, **J. R. Kumar***, *Journal of Cleaner Production*, 187 (2018) 449-458.
- 26) Modeling the UO₂ ex-AUC pellet process and predicting the fuel rod temperature distribution under steady-state operating condition, N. T. Hung, L. B. Thuan, T. C. Thanh, H. Nhuan, D. V. Khoai, N. V. Tung, J.-Y. Lee, **J. R. Kumar***, *Journal of Nuclear Materials*, 504 (2018) 191-197.
- 27) Spent V₂O₅-WO₃/TiO₂ catalyst processing for valuable metals by soda roasting-water leaching, I. Choi, G. Moon, J. Y. Lee, **J. R. Kumar***, *Hydrometallurgy*, 175 (2018) 292-299.
- 28) The UO₂ ex-ADU powder preparation and pellet sintering for optimum efficiency: experimental and modeling studies, N. T. Hung, L. B. Thuan, N. V. Tung, N. T. Thuy, J. Y. Lee*, **J. R. Kumar***, *Journal of Nuclear Materials*, 496 (2017) 177-181.
- 29) Precious Metals Extraction Processing in Chloride Media by Using Ionic Liquids as Novel Extractant Systems, **J. R. Kumar**, I. H. Choi, J. Y. Lee*, *Korean Chemical Engineering Research*, 55 (2017) 503-509.
- 30) Modeling conversion of Ammonium diuranate (ADU) into uranium dioxide (UO₂) powder, N. T. Hung, L. B. Thuan, D. V. Khoai, J. Y. Lee*, **J. R. Kumar***, *Journal of Nuclear Materials*, 479 (2016) 483-488.
- 31) Factors affect on bioremediation of Co(II) and Pb(II) onto *Lonicera Japonica* flower powder, L. L. Prasanna K. J. Reddy*, **J. R. Kumar**, Y. Y. Chang, J. K. Yang, *Desalination and Water Treatment*, 57 (2016) 13066-13088.
- 32) The role of macrocyclic compounds in the extraction and possible separation of platinum and rhodium from chloride solutions **J. R. Kumar***, J. Y. Lee*, *Scientific Reports (Nature Publication)*, 6:27668 (pp.1-14), 2016 (DOI: 10.1038/srep27668) .
- 33) Brandon mathematical model describing the effect of calcination and reduction parameters on specific surface area of UO₂ powders, N. T. Hung, L. B. Thuan, D. V. Khoai, J. Y. Lee*, **J. R. Kumar***, *Journal of Nuclear Materials*, 474 (2016) 150-154.
- 34) Synergistic extraction of uranium from Korean black shell ore leach liquors using amine with phosphorous based extractant systems, J. S. Kim, K. S. Han, S. J. Kim, S. D. Kim, J. Y. Lee, C. Han, **J. R. Kumar*** *Journal of Radioanalytical and Nuclear Chemistry*, 307 (2016) 843-854.
- 35) Process development for recovery of dysprosium from permanent magnet scraps leach liquor by hydrometallurgical techniques, H. S. Yoon, C. J. Kim, K. W. Chung, S. D. Kim, **J. R. Kumar***, *Canadian Metallurgical Quarterly*, 54 (2015) 318-327.
- 36) Recovery process development for the rare earths from permanent magnets scraps leach liquors, H. S. Yoon, C. J. Kim, K. W. Chung, S. D. Kim, **J. R. Kumar***, *Journal of the Brazilian Chemical Society*, 26 (2015) 1143-1151.
- 37) Recovery of boron and separation of lithium from uyuni solar brine using 2,2, 4-trimethyl-1,3-pentanediol (TPD), **J. R. Kumar**, C. J. Kim, H. S. Yoon, D. J. Kang, J. Y. Lee*, *Journal of Korean Institute of Metals and Materials*, 53 (2015) 578-583.
- 38) Thermal treatment for the separation of phosphate and recovery of rare earth metals (REMs) from Korean monazite, A. Kumari, R. Panda, M. K. Jha*, J. Y. Lee*, **J. R. Kumar**, V. Kumar, *Journal of Industrial and Engineering Chemistry*, 21 (2015) 696-703.
- 39) Leaching of rare earth metals (REMs) from Korean monazite concentrate, R. Panda, A. Kumari, J. Hait M. K. Jha*, V. Kumar, **J. R. Kumar**, J. Y. Lee*, *Journal of Industrial and Engineering Chemistry*, 20 (2014) 2035-2042.

- 40) Leaching behavior of uranium and vanadium using strong sulfuric acid from Korean black shale ore, J. S. Kim, K. W. Chung, H. I. Lee, H. S. Yoon, J. R. Kumar*, *Journal of Radioanalytical and Nuclear Chemistry*, 299 (2014) 81-87.
- 41) Synergistic solvent extraction of Neodymium(III) from chloride solutions using mixture of triisooctylamine and bis(2,4,4-trimethylpentyl) monothiophosphinic acid, B. N. Kumar, B. R. Reddy, M. L. Kantam, **J. R. Kumar**, J. Y. Lee*, *Separation Science and Technology*, 49 (2014)130-136.
- 42) Separation and recovery of vanadium from synthetic leach liquor solutions containing iron, calcium, sodium, aluminium, manganese by solvent extraction technique, **J. R. Kumar**, S. M. Shin, H. S. Yoon, C. W. Nam K. W. Chung J. Y. Lee, J. T. Park*, *Separation Science and Technology*, 49 (2014)819-828.
- 43) Recovery process development for uranium and vanadium from Korean Okcheon black shale ore leach liquors, J. S. Kim, S. D. Kim, H. I. Lee, J. Y. Lee, **J. R. Kumar***, *Monatshefte fur Chemie-Chemical Monthly*, 144 (2013) 1589-1596.
- 44) Behavior of extraction, stripping, and separation possibilities of rhenium and molybdenum from molybdenite roasting dust leaching solution using amine based extractant tri-otyl-amine (TOA), J. G. Kang, Y. U. Kim, S. H. Joo, H. S. Yoon, **J. R. Kumar**, K. H. Park, P. K. Parhi, S. M. Shin*, *Materials Transactions*, 54 (2013)1209-1212.
- 45) Up-gradation of MoO₃ and separation of copper, iron, zinc from roasted molybdenum ore by leaching process, J. Y. Lee, **J. R. Kumar***, H. S. Jeon, J. S. Kim, *Brazilian Journal of Chemical Engineering*, 30 (2013) 391-397.
- 46) Recovery of Rhenium and Molybdenum from Molybdenite Roasting Dust Leaching Solution by Ion Exchange Resins, S. H. Joo, Y. U. Kim, J. G. Kang, **J. R. Kumar**, H. S. Yoon, P.K. Parhi, S. M. Shin*, *Materials Transactions*, 53 (2012) 2034-2037.
- 47) Separation of platinum and rhodium from chloride solutions containing aluminum, magnesium and iron using solvent extraction and precipitation methods, B. Raju, **J. R. Kumar**, J. Y. Lee, H. S. Kwons, B.R. Reddy*, *Journal of Hazardous Materials*, 227-228 (2012) 142-147.
- 48) Solvent Extraction Studies on Uranium using Amine Based Extractants and Recovery from Low Grade Ore Leach Liquors, C. J. Kim, **J. R. Kumar***, J. Y. Lee, J. S. Kim, H. S. Yoon, *Journal of the Brazilian Chemical Society*, 23 (2012) 1254-1264.
- 49) Neodymium recovery by precipitation from synthetic leach liquor of concentrated rare earth mineral, J. Y. Lee, A. K. Jha, A. Kumari, **J. R. Kumar**, M. K. Jha, V. Kumar*, *Journal of Metallurgy and Materials Science*, 53 (2011) 349-354.
- 50) Solvent extraction of uranium(VI) and separation of vanadium(V) from sulfate solutions using Alamine 336, **J. R. Kumar**, J. Y. Lee*, J. S. Kim, H. S. Yoon, *Journal of Radioanalytical & Nuclear Chemistry*, 285(2010)301-308.
- 51) Solvent Extraction Separation and Recovery of Palladium and Platinum from Chloride Leach Liquors of Spent Automobile Catalyst, J. Y. Lee, B. Raju, B. N. Kumar, **J. R. Kumar**, B. R. Reddy, *Separation and Purification Technology*, 73 (2010) 213-218.
- 52) Extraction and separation of hexavalent molybdenum from acidic sulfate solutions using Alamine 336 as an extractant, J. Y. Lee*, **J. R. Kumar***, J. S. Kim, H. S. Yoon, *Periodica Polytechnica Chemical Engineering*, 54 (2010) 27-31.
- 53) Development of highly sensitive and selective method for spectrophotometric determination of aluminium(III) from environmental matrices, synthetic mixtures and alloys using orthohydroxy-propioiphenoneisonicotinoylhydrazone as chelating reagent, C. Ramachandraiah, **J. R. Kumar**, S. A. Reddy, J. Y. Lee, A. V. Reddy*, *Environmental Monitoring & Assessment*, 160 (2010) 23-31.

- 54) Studies on liquid-liquid extraction of tetravalent platinum from acidic chloride solutions using Alamine 336, **J. R. Kumar**, J. Y. Lee*, J. S. Kim, J. S. Sohn, *Solvent Extraction Research and Development, Japan*, 16 (2009) 23-36.
- 55) Liquid-liquid extraction and separation of platinum(IV)/rhodium(III) from acidic chloride solutions using tri-iso-octylamine, J. Y. Lee*, **J. R. Kumar***, J. S. Kim, H. K. Park, H. S. Yoon, *Journal of Hazardous Materials*, 168 (2009) 424-429.
- 56) Extraction and separation of Pt(IV)/Rh(III) from acidic solutions using Aliquat 336, J. Y. Lee*, **J. R. Kumar***, J. S. Kim, D. J. Kim, H. S. Yoon, *Journal of Industrial and Engineering Chemistry*, 15 (2009) 359-364.
- 57) Electrochemical investigation of allethrin in food matrices by using differential pulse adsorptive stripping voltammetry at hanging mercury drop electrode, T. Thriveni, **J. R. Kumar**, J. Y. Lee, N. Y. Sreedhar*, *Food Analytical Methods*, 2 (2009) 66-72.
- 58) Study of the voltammetric behaviour of the ethalfluralin and methalpropalin and its determination in environmental samples at hanging mercury drop electrode, T. Thriveni, **J. R. Kumar**, J. Y. Lee, N. Y. Sreedhar*, *Environmental Monitoring and Assessment*, 151 (2009) 9-18.
- 59) Synergistic enhancement and separation of zirconium(IV) and hafnium(IV) with 3-phenyl-4-benzoyl-5-isoxazolone in the presence of crown ethers, K. J. Reddy, **J. R. Kumar**, M. L. P. Reddy, A. V. Reddy*, K. H. Choo, *Separation Science & Technology*, 44 (2009) 2022-2040.
- 60) Selective and sensitive extractive spectrophotometric determination of micro amounts of palladium(II) in water samples, synthetic mixtures and hydrogenation catalysts: using a new reagent N-ethyl-3-carbazolecarboxaldehyde thiosemicarbazone, K. J. Reddy, **J. R. Kumar**, C. Ramachandraiah, S. A. Reddy, A. V. Reddy*, *Environmental Monitoring and Assessment*, 136 (2008) 337-346.
- 61) Solvent Extraction of PtCl₄ from Hydrochloric Acid Solution with Alamine336, M. S. Lee*, J. Y. Lee, **J. R. Kumar**, J. S. Kim, J. S. Sohn, *Materials Transactions*, 49 (2008) 2823-2828.
- 62) Development of highly sensitive extractive spectrophotometric determination of nickel(II) in medicinal leaves, soil, industrial effluents and standard alloy samples using pyridoxal-4-phenyl-3-thiosemicarbazone, L. S. Sarma, **J. R. Kumar**, K. J. Reddy, T. Thriveni, A. V. Reddy*, *Journal of the Trace Elements in Medicine & Biology*, 22 (2008) 285-295.
- 63) Comparison of liquid-liquid extraction studies on platinum(IV) from acidic solutions using bis(2,4,4-trimethylpentyl) monothiophosphinic acid, **J. R. Kumar**, H. I. Lee, J. Y. Lee*, J. S. Kim, J. S. Sohn, *Separation and Purification Technology*, 63 (2008) 184-190.
- 64) Development of highly sensitive extractive spectrophotometric method for the determination of nickel(II) from environmental matrices using N-ethyl-3-carbazolecarboxaldehyde-3- thiosemicarbazone, C. Ramachandraiah, **J. R. Kumar**, K. J. Reddy, S. L. Narayana, A. V. Reddy*, *Journal of Environmental Management*, 88 (2008) 729-736.
- 65) Synthesis of New Reagent Benzyloxybenzaldehydethiosemicarbazone (BBTSC): Selective, Sensitive and Extractive Spectrophotometric Determination of Pd(II) in Water Samples and Synthetic Mixtures, S. L. Narayana, K. J. Reddy, S. A. Reddy, **J. R. Kumar**, A. V. Reddy*, *Journal of the Chinese Chemical Society*, 55 (2007) 1233-1241.
- 66) Voltammetric determination of the herbicides nitratin and oryzalin in agricultural formulations, vegetables and grape juice samples, T. Thriveni, **J. R. Kumar**, D. Sujatha, N. Y. Sreedhar*, *Food Chemistry*, 104 (2007) 1304-1309.
- 67) Behaviour and quantification studies of terbacil and lenacil in environmental samples using cyclic and adsorptive stripping voltammetry at hanging mercury drop electrode, T. Thriveni, **J. R. Kumar**, D. Sujatha, N. Y. Sreedhar*, *Environmental Monitoring and Assessment*, 128 (2007) 359-368.

- 68) Liquid-liquid extraction of tetravalent hafnium from acidic chloride solutions using bis(2,4,4-trimethylpentyl) dithiophosphinic acid (Cyanex 301), **J. R. Kumar**, B. R. Reddy*, K. J. Reddy, A. V. Reddy, *Separation Science and Technology*, 42 (2007) 865-877.
- 69) Spectrophotometric determination of zinc in foods using N-ethyl-3-carbazolecarboxaldehyde-3-thiosemicarbazone: evaluation of a new analytical reagent, K. J. Reddy, **J. R. Kumar**, C. Ramachandraiah, T. Thriveni, A. V. Reddy*, *Food Chemistry*, 101 (2007) 585-591.
- 70) N-ethyl-3-carbazolecarboxaldehyde-3-thiosemicarbazone: A New Extractive Spectrophotometric Reagent for the Determination of Copper(II) in Environmental and Pharmaceutical Samples, K. J. Reddy, **J. R. Kumar**, S. L. Narayana, C. Ramachandraiah, T. Thriveni, A. V. Reddy*, *Environmental Monitoring and Assessment*, 124 (2007) 309-320.
- 71) Liquid-Liquid Extraction of Tetravalent Zirconium and Hafnium from Acidic Chloride Solutions using 2-Hydroxy-5-nonylsalicylaldehyde-oxime (LIX 860N-IC), B. R. Reddy*, **J. R. Kumar**, *Solvent Extraction Research and Development, Japan*, 13 (2006) 37-49.
- 72) 3-Phenyl-4-acyl-5-Isoxazolones as Reagents for Liquid Liquid Extraction of Tetravalent Zirconium and Hafnium from Acidic Chloride Solutions, B. R. Reddy*, **J. R. Kumar**, A. V. Reddy, *Journal of the Brazilian Chemical Society*, 17 (2006) 780-784.
- 73) Studies of Zinc(II) in Pharmaceutical and Biological Samples by Extractive Spectrophotometry: Using Pyridoxal-4-phenyl-3-thiosemicarbazone as Chelating Reagent, L. S. Sarma, **J. R. Kumar**, K. J. Reddy, T. Thriveni, A. V. Reddy*, *Journal of the Brazilian Chemical Society*, 17 (2006) 463-472.
- 74) Synergistic extraction of zirconium(IV) and hafnium(IV) with 4-acylbis(1-phenyl-3-methyl-5-pyrazolones) in the presence of neutral organophosphorus extractants, K. J. Reddy, **J. R. Kumar**, M. L. P. Reddy, A. V. Reddy*, *Solvent Extraction & Ion Exchange*, 24 (2006) 419-432.
- 75) Cyanex 272 as an extractant for the extraction of tetravalent hafnium from acidic chloride solutions, B. R. Reddy*, **J. R. Kumar**, S. V. Rao, *Solvent Extraction Research and Development, Japan*, 12 (2005) 47-58.
- 76) Development of an Extractive Spectrophotometric Method for the Determination of Copper(II) in Leafy Vegetable and Pharmaceutical Samples using Pyridoxal-4-Phenyl-3-Thiosemicarbazone (PPT), L. S. Sarma, **J. R. Kumar**, K. J. Reddy, A. V. Reddy*, *Journal of Agricultural and Food Chemistry (ACS Publication)*, 53 (2005) 5492-5498.
- 77) Studies on liquid-liquid extraction of tetravalent hafnium from weakly hydrochloric acid solutions by LIX 84-IC, B. R. Reddy*, **J. R. Kumar**, *Separation and Purification Technology*, 42 (2005) 169-174.
- 78) Solvent Extraction of Tetravalent zirconium from acidic chloride solutions using thiosubstituted organophosphorus acids Cyanex 301 and 302, B. R. Reddy*, **J. R. Kumar**, A. V. Reddy*, *Journal of Chemical Technology and Biotechnology*, 79 (2004) 1301-1307.
- 79) Solvent extraction of cadmium(II) from sulphate solutions using TOPS 99, PC 88A, Cyanex 272 and their mixtures, B. R. Reddy*, D. N. Priya, **J. R. Kumar**, *Hydrometallurgy* 74 (2004) 277-283.
- 80) Solvent Extraction of Zirconium (IV) From Acidic Chloride Solutions Using 2-Ethyl hexylphosphonic acid mono-2-ethyl-hexyl ester (PC-88A), B. R. Reddy*, **J. R. Kumar**, D. N. Priya, A. V. Reddy*, *Hydrometallurgy* 72 (2004) 303-307.
- 81) Solvent extraction of Hf(IV) from acidic chloride solutions using Cyanex 302, B. R. Reddy*, **J. R. Kumar**, K. P. Raja, A. V. Reddy, *Minerals Engineering*, 17 (2004) 939-942.
- 82) Highly Sensitive Extractive Spectrophotometric Determination of Palladium(II) in Synthetic Mixtures and Hydrogenation Catalysts Using Benzildithiosemicarbazone, B. K. Reddy, K. J. Reddy, **J. R. Kumar**, A. V. Reddy*, *Analytical Sciences*, 20 (2004) 925-930.

- 83) Solvent Extraction of Tetravalent Hafnium From Acidic Chloride Solutions Using 2- Ethyl hexyl phosphonic acid mono-2--ethyl hexyl ester (PC-88A), B. R. Reddy*, **J. R. Kumar**, A. V. Reddy*, *Minerals Engineering*, 17 (2004) 553-556.
- 84) Solvent Extraction of Zirconium(IV) From Acid Chloride Solutions Using LIX 84-IC, B. R. Reddy*, **J. R. Kumar**, A. V. Reddy*, *Hydrometallurgy* 74 (2004) 173-177.
- 85) Liquid-liquid Extraction of Tetravalent Zirconium From Acidic Chloride Solutions Using Cyanex 272, B. R. Reddy*, J. R. Kumar, A. V. Reddy*, *Analytical Sciences*, 20 (2004) 501-505.
- 86) Extractive Spectrophotometric Determination of Cobalt(II) in Synthetic and Pharmaceutical Samples Using Cyanex 923, B. R. Reddy*, P. Radhika, **J. R. Kumar**, D. N. Priya, K. Rajagopal, *Analytical Sciences*, 20 (2004) 345-349.
- 87) A Sensitive Extractive Spectrophotometric Determination of Cobalt(II) in Real Samples Using Pyridoxal-4-phenyl-3-thiosemicarbazone, L. S. Sarma, **J. R. Kumar**, C. J. Kumar, A. V. Reddy*, *Analytical Letters*, 36 (2003) 605-618.
- 88) A Rapid and Sensitive Extractive Spectrophotometric Determination of Copper(II) in Pharmaceutical and Environmental Samples using Benzildithiosemicarbazone, B. K. Reddy, **J. R. Kumar**, K. J. Reddy, L. S. Sarma, A. V. Reddy*, *Analytical Sciences*, 19 (2003) 423-428.
- 89) A Rapid and Sensitive Extractive spectrophotometric determination of Palladium(II) in Synthetic Mixtures and Hydrogenation Catalysts Using Pyridioxal-4-phenyl-3-thiosemicarbazone, L. S. Sarma, **J. R. Kumar**, K. J. Reddy, A. K. Kumar, A. V. Reddy*, *Analytical Sciences*, 18 (2002) 1257-1261.
- 90) Sensitive Extractive Spectrophotometric Determination of Zinc(II) in Biological and Environmental Samples Using Benzildithiosemicarbazone, B. K. Reddy, **J. R. Kumar**, L. S. Sarma, A. V. Reddy*, *Analytical Letters*, 35 (2002) 1415-1427.
- VI. Research Papers Published in International Seminar Proceedings (With ISBN numbers & Full, peer-reviewed papers):**
- 91) Recovery of Rare Earth Elements from Waste Permanent Magnets Leach Liquors, **R. K. Jyothi**, K. W. Chung, C. J. Kim, H. S. Yoon, *Rare Metal Technology*, pp 335-345, 2020, The Minerals, Metals & Materials Series book series (MMMS), ISBN: 978-3-030-36757-2.
- 92) Hydrometallurgical process development recovery of vanadium and tungsten from spent SCR catalyst, I-H, Choi, G. Moon, J.-Y. Lee, **R. K. Jyothi***, The 12th International Symposium on East Asia Resources Recycling Technology (EARTH 2019), at Alpensia Resort Center, Pyeongchang, Gangwon-do, South Korea on 1th-17th Oct 2019, P2-21, pp. 552-555, 2019, ISBN 978-89-952527-5-8 93530.
- 93) Extraction of vanadium and tungsten from SCR spent catalyst leach liquor by hydrometallurgical routes, A. N. C. Sola, J.-Y. Lee, P.K. Parhi, **R. K. Jyothi***, The 12th International Symposium on East Asia Resources Recycling Technology (EARTH 2019), at Alpensia Resort Center, Pyeongchang, Gangwon-do, South Korea on 1th-17th Oct 2019, P2-20, pp. 549-551, 2019, ISBN 978-89-952527-5-8 93530.
- 94) Recovery of thorium from monazite leach liquors by hydrometallurgical approaches, **R. K. Jyothi***, H.-I. Kim, H. N. Kang, J.-Y. Lee, The 12th International Symposium on East Asia Resources Recycling Technology (EARTH 2019), at Alpensia Resort Center, Pyeongchang, Gangwon-do, South Korea on 1th-17th Oct 2019, S5-R3-3, pp. 364-367, 2019, ISBN 978-89-952527-5-8 93530.
- 95) Recovery of Tungsten from Spent V₂O₅-WO₃/TiO₂ Catalyst, I.H. Choi, G. Moon, **J. R. Kumar**, J.-Y. Lee, EXTRACTION 2018, TMS, MET.SOC, & SME, Ottawa, Ontario, Canada, pp.2455-2469, 2018, ISBN 978-3-319-95021-1 ISBN 978-3-319-95022-8 (e-Book).

- 96) Recovery of tungsten and vanadium from spent SCR catalyst by hydrometallurgical methods, COM 2017, I. Choi, G. Moon, J.Y. Lee*, J. R. Kumar*, Conference of Metallurgists (COM) 2017, Aug 27th to Aug 30th 2017, Hyatt Regency Hotel, Vancouver, Canada, paper no. 9746, pp: 1-10, **2017**, ISBN:978 -1-926872-36-0
- 97) Recovery of critical rare earth elements for green energy technologies, **J. R. Kumar***, J. Y. Lee, Rare Metal Technology 2017 (TMS-2017), Feb 26th to Mar 2nd, 2017 at San Diego Convention Center, California, USA, 19-29 pages, 2017, ISBN: 978-3-319-51084-2
- 98) Extraction, separation and recovery of thorium from Korean monazite ore leach liquors, **J. R. Kumar***, K. W. Chung, H. S. Yoon, J. Y. Lee, 28th International Mineral Processing Congress (IMPC) 2016, Sep 11-15, 2016, Quebec City Convention Center, Quebec City, Canada, Paper ID: 761, 1-11 pages, 2016, ISBN: 978-1-926872-29-2
- 99) Recovery of valuable metals from spent SCR catalyst for DeNOx by using hydrometallurgical methods, J. S. Kim, W. J. Kim, M. J. Kim, J. Y. Lee, **J. R. Kumar***, 6th International Conference on Engineering for Waste and Biomass Valorization (WasteEng¹⁶), Albi, France, May 23-26, 2016, pp. 1092-1099, ISBN: 979-10-91526-05-0
- 100) Recycling of permanent magnet scraps by using hydrometallurgical techniques, **J. R. Kumar***, H. Ha, J. S. Kim, C. J. Kim, K. W. Chung, S. D. Kim, H. S. Yoon, 6th International Conference on Engineering for Waste and Biomass Valorization (WasteEng¹⁶), Albi, France, May 23-26, 2016, pp. 1115-1122, ISBN: 979-10-91526-05-0
- 101) Recovery of dysprosium and neodymium from permanent magnet scraps leach liquors by environmentally friendly hydrometallurgical routes, H. S. Yoon, C. J. Kim, K. W. Chung, S. D. Kim, **J. R. Kumar***, The Lucy Rosato Memorial Symposium on Sustainable Hydrometallurgical Processing on August 23-26, 2015 at The Fairmont Royal York Hotel, Toronto, Canada, ISBN: 978-1-926872-32-2, Paper no.: 9146, 1-13, 2015, ISBN: 978-1-926872-32-2
- 102) Status of separation and purification of rare earth elements from Korean ore, J. S. Kim, H. S. Kim, M. J. Kim, J. Y. Lee, **J. R. Kumar***, Rare Metal Technology 2015 (TMS-2015), 2015, USA, ISBN: 978-1-119-09730-2, *Rare Metals Technology Volume*, 117-126, 2015
- 103) Rare earth elements gallium and yttrium recovery from (kc) Korean red mud samples by solvent extraction and heavy metals removal/ stabilization by carbonation, T. Thriveni, **J. R. Kumar**, Ch. Ramakrishna, Y. Jegal, J. W. Ahn*, Rare Metal Technology 2015 (TMS-2015), 2015, USA, ISBN: 978-1-119-09730-2, *Rare Metals Technology Volume*, 157-168, 2015
- 104) Hydrometallurgical process development for recovery of the dysprosium from permanent magnet scrap leach liquor using 2-ethylhexyl phosphonic acid mono-2-ethylhexyl ester (PC 88A) as an extractant system, **J. R. Kumar*** C. J. Kim K. W. Chung, S. D. Kim, H. S. Yoon, Hydrometallurgy 2014 – 7th International Symposium, Victoria, BC, Canada, ISBN: 978-1-926872-23-0, Volume II, 423-435, 2014
- 105) Recovery of rare earth metals (REMs) from primary and secondary resources: A review, V. Kumar*, M. K. Jha, A. Kumari, R. Panda, **J. R. Kumar**, Jin-Young Lee, Rare Metal Technology 2014 (TMS-2014), 2014, San Diego, California USA, ISBN: 978-1-118-88882-7, 81-88, 2014
- 106) Status and preparation technology of rare earth materials, J. S. Kim, **J. R. Kumar***, J. Y. Lee, The 8th Pacific Rim International Congress on Advanced Materials and Processing, TMS Meeting at Hawaii Island, USA, ISBN: 978-0-470-94309-0, 1765-1774, 2013
- 107) Leaching of uranium and vanadium from Korean domestic ore, J. S. Kim, K. W. Chung, H. I. Lee, J. Y. Lee, **J. R. Kumar***, REWAS 2013: Enabling Materials Resource Sustainability from The Minerals, Metals & Materials Society (TMS), San Antonio, USA, ISBN: 978-1-11860-587-5, 20-26, 2013

- 108) Recovery of indium from waste etching solution of liquid crystal display (LCD) glass through hydrometallurgical process, Joon-Soo Kim, J. R. Kumar*, J. Y. Lee, H. K. Park, 4th International Conference on Engineering for Waste and Biomass Valorisation, Porto, Portugal, ISBN: 979-10-91526-00-5, 1353-1358, September 10-13, 2012
- 109) Extraction of the tetravalent platinum from acidic chloride solutions using amine based extractants: A comparative study, **J. R. Kumar***, J. Y. Lee*, J. S. Kim, H. K. Park, 4th International Conference on Engineering for Waste and Biomass Valorisation, Porto, Portugal, ISBN: 979-10-91526-00-5, 1405-1409, September 10-13, 2012
- 110) Recovery of vanadium and molybdenum from spent HDS catalyst using amine based extractants by solvent extraction technique, **J. R. Kumar**, M. W. Kang, J. Y. Lee*, J. S. Kim, W. S. Min, The 11th International Symposium on East Asian Resources Recycling Technology (EARTH 2011), Kaohsiung City, Taiwan, ISBN: 978-986-87755-0-3, 546-550, 2011
- 111) Separation and recovery of platinum and rhodium from chloride leach liquors of spent LCD glass furnace, J. Y. Lee, B. Raju, B. N. Kumar, **J. R. Kumar**, B. R. Reddy, The 11th International Symposium on East Asian Resources Recycling Technology (EARTH 2011), Kaohsiung City, Taiwan, ISBN: 978-986-87755-0-3, 558-561, 2011
- 112) Separation possibilities of light rare-earths from chloride solutions of monazite ore using organophosphorus based extractants, J. S. Kim, B. N. Kumar, **J. R. Kumar**, Jin-Young Lee, B. R. Reddy, The 11th International Symposium on East Asian Resources Recycling Technology (EARTH 2011), Kaohsiung City, Taiwan, ISBN: 978-986-87755-0-3, 574-578, 2011
- 113) Solvent extraction and separation of U(VI) and V(V) from sulphuric acid solutions using Alamine 336, Alamine 308, Alamine 304 & Aliquat 336 as an extractants, J. S. Kim, **J. R. Kumar***, J. Y. Lee, H. S. Yoon, European Metallurgical Conference (EMC) 2011, Dusseldorf, Germany, ISBN: 978-3-940276-39-1, Volume 4, 1149-1159, 2011
- 114) Comparison of solvent extraction studies on tetravalent platinum from acidic chloride solutions using tri-octyl/decyl amine and bis(2,4,4-trimethylpentyl) monothiophosphinic acid, J. R. Kumar*, J. Y. Lee, J. S. Kim, J. S. Sohn, EPD Congress and The Minerals, Metals & Materials Society (TMS), San Francisco, California, USA, ISBN: 978-0-87339-732-2, 453-457, 2009
- 115) Separation and Recovery of Palladium and Platinum from Chloride Leach Liquors of Spent Automobile Catalyst, B. R. Reddy*, B. Raju, **J. R. Kumar**, J. Y. Lee, J. S. Kim, The 10th International Symposium on East Asian Resources Recycling Technology (EARTH 2009), Jeju, Korea, ISBN: 978-89-952527-4-4 93530, T2-01, 91-94, 2009
- 116) Uranium Resources, Production/Mining and Supply/Demand, **J. R. Kumar**, J. Y. Lee*, J. S. Kim, H. S. Yoon, The 10th International Symposium on East Asian Resources Recycling Technology (EARTH 2009), Jeju, Korea, ISBN: 978-89-952527-4-4 93530, T2-31, 217-220, 2009
- 117) Status and Recycling Technology of Indium / Gallium Scraps, J. S. Kim*, S. Woo, J. Y. Lee, **J. R. Kumar**, The 10th International Symposium on East Asian Resources Recycling Technology (EARTH 2009), Jeju, Korea, ISBN: 978-89-952527-4-4 93530, T2-49, 298-301, 2009
- 118) Removal of manganese from cobalt and nickel in laterite leaching solution by solvent extraction using D2EHPA, J. Y. Lee*, H. I. Lee, **J. R. Kumar**, J. S. Kim, The 10th International Symposium on East Asian Resources Recycling Technology (EARTH 2009), Jeju, Korea, ISBN: 978-89-952527-4-4 93530, P016, 388-390, 2009
- 119) Solvent extraction of tetravalent platinum from acidic chloride solutions using Alamine 336, J. Y. Lee*, **J. R. Kumar**, J. S. Kim, J. S. Sohn, REWAS 2008- Global Symposium on Recycling, Waste Treatment and Clean Technology, Cancun, Mexico by The Minerals, Metals & Materials Society (TMS), ISBN: 978-0-87339-726-

1, 1755-1760, 2008

- 120) Extractive Spectrophotometric Determination of Zinc(II) with Pyridioxal-4-phenyl-3-thiosemicarbazone, L. S. Sarma, **J. R. Kumar**, A. V. Reddy*, IInd International Seminar on Analytical Techniques in Monitoring the Environment, December 18-21st, 2000, Tirupati, India, ISBN: 817-8000-261, 139-142, 2000

VI Full Papers in International and National Seminar Proceedings:

VI. A. International proceedings:

- 121) Thorium recovery from Korean monazite ore leach liquors using primary amine, **J. R. Kumar***, Kyeong Woo Chung, Ho-Sung Yoon, Jin-Young Lee, The 13th International Symposium on East Asian Resources Recycling Technology (EARTH-2015), at Chulalongkorn University, Pattaya, Thailand, Code 126916, RD-O-002, 275-279, 2015, Scopus paper
- 122) Extraction of tungsten and vanadium from spent SCR catalyst with caustic soda by autoclave process, I. H. Choi, J. S. Kang, **J. R. Kumar**, G. H. Mun, J. Y. Lee*, The 13th International Symposium on East Asian Resources Recycling Technology (EARTH-2015), at Chulalongkorn University, Pattaya, Thailand, RD-O-013, 354-356, 2015, Scopus paper
- 123) Solvent extraction and stripping of boron from brine using 2,2,4-trimethyl-1,3-pentanediol, **J. R. Kumar**, C. J. Kim, H.S. Yoon, J. Y. Lee*, The 12th International Symposium on East Asian Resources Recycling Technology (EARTH-2013), Zhangjiajie, Hunan, China, VII-16-125, 820-823, 2013
- 124) Extraction of uranium from low grade leach liquors using synergistic solvent extraction technique, **J. R. Kumar***, J. S. Kim, J. Y. Lee, H. S. Yoon, Digests of the 2012 Fall Meeting and 39th Conference of The Korean Institute of Resources and Recycling, Yeosu, Korea, 1-4, 40-44, 2012
- 125) Precious Metals Recovery from Mining Waste by Hydrometallurgical Routes-An Overview, **J. R. Kumar**, H. S. Jeon, J. Y. Lee*, H. S. Yoon, International Symposium on Mine Reclamation with Sustainable Development, Kangwoon Land Hotel, Gangwon-do, Korea, 191-194, 2011
- 126) Solvent Extraction Methodologies for Uranium: A Brief Review, **J. R. Kumar**, J. Y. Lee*, J. S. Kim, H.S. Yoon, Digests of the 2010 fall Meeting and 35th Conference of The Korean Institute of Resources and Recycling & 2010 Green Tech Symposium on Organic Materials Recycling, Daejeon, Korea, 1-2, 149-158, 2010
- 127) Liquid-Liquid Extraction of U(VI) From Sulfate Solutions Using Tri-octyl/decyl amine as an Extractant, **J. R. Kumar**, J. S. Kim, J. Y. Lee*, H. S. Yoon, Digests of the 2010 spring Meeting and 34th Conference of The Korean Institute of Resources and Recycling, Goesan, Korea, 148-152, 2010
- 128) Molybdenum: Resources, Supply/Demand, Biological Role and Applications, **J. R. Kumar**, J. Y. Lee*, J. S. Kim, H. S. Yoon, Digests of the 2009 Spring Meeting and 33rd Conference of the Korea Institute of the Resources Recycling (KIRR), Seoul, Korea, 214-217, 2009
- 129) Recycling of Metals from Waste Mining Materials-A General Study, J. Y. Lee*, **J. R. Kumar***, J. S. Kim, H. S. Yoon, 2009 International Symposium on Mine Reclamation, Kangwon Land, Gangwon-do, Korea, 276-278, 2009
- 130) Solvent Extraction and Separation of Molybdenum(VI) From Acidic Sulphate Solutions Using Alamine 336, J. Y. Lee*, H. S. Jeon, **J. R. Kumar**, Digests of the 2009 Fall Meeting and 32rd Conference of the Korea Institute of the Resources Recycling (KIRR): Symposium on the Recycling Technologies for Electronic Scraps, Daegu, Korea, 188-193, 2008
- 131) Restriction of hazardous substances (RoHS)-A brief study, **J. R. Kumar***, J. Y. Lee, J. S. Kim, J. S. Sohn, Digests of the 2009 Fall Meeting and 32rd Conference of the Korea Institute of the Resources Recycling (KIRR): Symposium on the Recycling Technologies for Electronic Scraps, Daegu, Korea, 244-248, 2008

- 132) Liquid-liquid extraction of platinum(IV) from acidic chloride solutions using tri-iso-octylamine (Alamine 308), J. Y. Lee, **J. R. Kumar***, J. S. Kim, J. S. Sohn, Digests of the 2008 Spring Meeting and 31st Conference of the Korea Institute of the Resources Recycling (KIRR) & Tripartite International Symposium on Recycling of Waste Agricultural Plastic Film, Jingu, Korea, P13, 204-208, 2008
- 133) Solvent extraction of tetravalent platinum from acidic chloride solutions using Aliquat 336, Jin-Young Lee, **J. R. Kumar***, J. S. Kim, J. S. Sohn, Digests of the 2008 Spring Meeting and 31st Conference of the Korea Institute of the Resources Recycling (KIRR) & Tripartite International Symposium on Recycling of Waste Agricultural Plastic Film, Jingu, Korea, P17, 223-227, 2008
- 134) Liquid-liquid extraction of platinum from acidic chloride solutions using Alamine 336, **J. R. Kumar**, J.Y. Lee*, J. S. Kim, J. S. Sohn, Digests of the 2007 Fall Meeting and 30th Conference of the Korea Institute of the Resources Recycling (KIRR), Korea, P1-9, 71-76, 2007
- 135) Liquid-liquid extraction of platinum (IV) from acidic chloride solutions using Cyanex 302, J. Y. Lee, **J. R. Kumar***, J. S. Kim, J. S. Sohn, Korean Geosystem Engineering Annual Conference, Korea, 364-369, 2007
- 136) Solvent Extraction of Cadmium From Sulphate Solutions Using Sodium Salts of TOPS-99, PC -88A, Cyanex -272 and Their mixtures, D. N. Priya, **J. R. Kumar**, B. R. Reddy, Proceedings of International Symposium on Solvent Extraction, Bhubaneswar, India, 123-134, 2002

VI.B. National proceedings:

- 137) Liquid-liquid extraction of Zr(IV) from acidic chloride solutions using LIX 860N-IC, **J. R. Kumar**, B. R. Reddy, K. J. Reddy, A. V. Reddy*, Nuclear and Radiochemistry Symposium, Amruthsar, India, 133-134, 2005
- 138) Processing and Recovery of Cadmium and Nickel from Chloride Leach Liquors of Spent Batteries by Hydrometallurgical Route, D. N. Priya, P. Radhika, **J. R. Kumar**, B. R. Reddy*, National Seminar on role in Chemistry in the Emerging Areas of Applied Sciences, Tirupati, India, 107-109, 2004
- 139) Extractive Spectrophotometric Determination of Fe(III), Co(II), Ni(II), Zn(II) and Cu(II) in Industrial Wastes Using Pyrdioxal-4-phenyl-3-thiosemicarbazone, L. S. Sarma, **J. R. Kumar**, K. J. Reddy, A. V. Reddy*, National Seminar on role in Chemistry in the Emerging Areas of Applied Sciences, Tirupati, India, 164-167, 2004
- 140) LIX 860N-IC as an Extractant for the Extraction of Hf(IV) From Acidic Chloride Solutions, **J. R. Kumar**, A.V. Reddy, B. R. Reddy*, National Seminar on role in Chemistry in the Emerging Areas of Applied Sciences, Tirupati, India, 120-122, 2004
- 141) Studies on Solvent Extraction of Zirconium(IV) and Hafnium(IV) Using Cyanex 272, **J. R. Kumar**, A. V. Reddy, B. R. Reddy*, Indian Chemical Engineering Congress, Bhubaneswar, India, 36-37, 2003

VII. Abstract Presentations in Conferences:

VII A. International conferences:

- 142) Rare earths extraction and separation from permanent magnet waste leach liquors by hydrometallurgical techniques, R. K. Jyothi*, K. W. Chung*, H.-S. Yoon, C. J. Kim, The 12th International Symposium on East Asia Resources Recycling Technology (EARTH 2019), at Alpensia Resort Center, Pyeongchang, Gangwon-do, South Korea on 1th-17th Oct 2019, S6-R3-7, pp.379, 2019, ISBN 978-89-952527-5-8 93530
- 143) Organic acid mediated extraction and leaching kinetics study of neodymium from the Scrap Magnet, S.S. Behera, H.I. Kim, **J. R. Kumar**, P.K. Parhi, J. Y. Lee, The 12th International Symposium on East Asia Resources Recycling Technology (EARTH 2019), at Alpensia Resort Center, Pyeongchang, Gangwon-do, South Korea on 1th-17th Oct 2019, S5-R2-10, pp. 277-278, 2019, ISBN 978-89-952527-5-8 93530

- 144) Sustainable Secondary Resources Innovation: Technology development for valuable metals recovery from spent catalyst by hydrometallurgical routes, I-H. Choi, G. Moon, J-Y Lee and **R. K. Jyothi**, 11th Korea-Australia CSIRO/KIGAM Joint Symposium on *Emerging Technologies for Minerals and Metals during Tuesday 25th June 2019, Daejeon Korea*
- 145) Breakthrough recycling technologies for the recovery of critical rare elements: Future sustainable environmental solutions, T. Thriveni, J. Y. Lee, **R. K. Jyothi**, *1st International symposium on Electronic Waste & End Life Vehicals*, at ICC Jeju, Korea Scheduled on May 19-22, 2019 conducting by *Korean Society of Waste Management*.
- 146) Spent SCR Catalyst Processing for Recovery of Valuable Metals by Hydrometallurgical Routes, J. Kang*, J.Y. Lee*, V. C. Arellano, A. B. C. Sola, **R. K. Jyothi**, *1st International symposium on Electronic Waste & End Life Vehicals*, at ICC Jeju, Korea Scheduled on May 19-22, 2019 conducting by *Korean Society of Waste Management*.
- 147) Reclamation of vanadium and tungsten from spent V₂O₅-WO₃/TiO₂ catalyst by hydrometallurgical route, In-Hyeok Choi, Jin-Young Lee, **Rajesh Kumar Jyothi***, ICEAN-2018, 30th Oct to 2nd Nov, 2018, 6B-IL-7.
- 148) Rare earths recovery from permanent magnets scraps by hydrometallurgical methods, **J. R. Kumar***, at International Conference on Science, Technology and Applications of Rare Earths (ICSTAR18), September 23rd to 25th, 2018, IT-2, pp:19.
- 149) Ionic liquids as novel extractant systems for PGM metal extraction processing, **J. R. Kumar**, J. Y. Lee, September 12th to 14th 2018, Annual meeting of The Korean Society of Clean Technology, Gwang-ju, Korea, CT-47, pp: 62.
- 150) Crowding effect on dysprosium extraction and separation from pre-consumer waste of permanent magnets, **J. R. Kumar**, K. W. Chung, J.Y. Lee, EXTRACTION 2018, TMS, MET.SOC, & SME, Ottawa, Ontario, Canada, August 26th to 29th 2018.
- 151) Aromatic diluents impact on light rare earths extraction and possible separation from chloride solutions using bis(2,4,4-triethylpentyl) phosphinic acid as an extractant, **J. R. Kumar**, H-R. Kim, J. S. Kim, J.Y. Lee, EXTRACTION 2018, TMS, MET.SOC, & SME, Ottawa, Ontario, Canada, August 26th to 29th 2018.
- 152) Recovery of critical rare earths for green energy applications: Grand opportunities to create wealth from waste, **J. R. Kumar**, T. Thrivenini, J. Y. Lee, J-W. Ahn, 2018 Joint International Conference of the Geological Science & Technology of Korea, BEXCO, April 17th to 18th 2018, Busan City, Korea.
- 153) The recovery of rare earth elements for clean energy applications: green solutions, **J. R. Kumar**, T. Thrivenini, J. Y. Lee, J-W. Ahn, 2018 The Korea Institute of Metals and Materials (KIM) spring conference, April 4th to 6th 2018, Jeju, Korea, pp: 125.
- 154) Recovery of rare earths for green technology applications: grand opportunities to create wealth from waste, **R. Kumar**, J.Y Lee, The 11th International Conference on Multi-functional Materials and Applications, Anhui Jianzhu University, Hefei City, China, pp.3, 2017
- 155) Separation and recovery of rare earths for sustainable developments: By environmentally sound solutions, **J. R. Kumar**, J.Y Lee, The 10th International Conference on Multi-functional Materials and Applications, Khon Kaen University, Thailand, pp.5, 2016
- 156) Recovery of tungsten from spent V₂O₅-WO₃-TiO₂ SCR catalyst, C-I Huk, M-K Hee, **J. R. Kumar**, J. Y. Lee, Digests of the 2016 fall meeting and 47th conference of KIRR & Special symposium of synthetization of titanium materials by TiCl₄ at Busan, Korea, pp. 76, 2016
- 157) Thorium is future nuclear energy resource? **J. R. Kumar**, K-W Chung, H-S Yoon, , J-Y Lee, Digests of the 2016 fall meeting and 47th conference of KIRR & Special symposium of synthetization of titanium materials by TiCl₄ at Busan, Korea, pp. 81-82, 2016

- 158) Separation of tungsten and vanadium from alkali leach liquor of spent V_2O_5 - WO_3 - TiO_2 SCR catalyst, M-K Hee, C-I Huk, J-Y Lee, K-H Park, **J. R. Kumar**, Digests of the 2016 fall meeting and 47th conference of KIRR & Special symposium of synthetization of titanium materials by $TiCl_4$ at Busan, Korea, pp. 125, 2016
- 159) Future Prospects and Challenges in Recycling of Rare Earths based Materials for Sustainable Energy Sources, **J. R. Kumar**, International Seminar on Mineral Processing Technology (MPT) 2016, TCS Campus, Pune, India, Beach Sands II: Rare Earths and Titanium Ore, 273, 2016
- 160) Thorium recovery from Korean monazite ore leach liquors using primary amine, **J. R. Kumar**, J. Y. Lee, J. S. Kim, S. M. Shin, Digests of the 2014 spring meeting and 42nd KIRR Conference, Changwoon, Korea, P46, 207, 2014
- 161) Recovery of boron from solutions using 2,2,4-trimethyl-1,3-pentanediol as an extractant system, **J. R. Kumar***, C. J. Kim, H. S. Yoon, J. Y. Lee, The 12th Korea/Japan International Symposium on Resources Recycling and Materials Science, KIGAM, Daejeon, Korea, PO-20, 242, 2014
- 162) Uranium-di-oxide powder preparation via ammonium uranyl carbonate precipitation route, N. T. Hung, L. B. Thuan, J. Y. Lee*, **J. R. Kumar**, The 12th Korea/Japan International Symposium on Resources Recycling and Materials Science, KIGAM, Daejeon, Korea, PO-21, 243, 2014
- 163) Recovery of vanadium and separation of other associate elements from sulfate solutions by using environmentally friendly hydrometallurgical route, **J. R. Kumar**, S. M. Shin, J. T. Park, J. Y. Lee, The GRDC Symposium 2013, Innovative Science and Engineering for creative Economic Ecosystems, Ewha Womans University, Seoul, Korea, P11, 70, 2013
- 164) Synergistic solvent extraction studies of uranium from sulfate solutions, J. S. Kim, **J. R. Kumar**, S. D. Kim, J. Y. Lee, The GRDC Symposium 2013, Innovative Science and Engineering for creative Economic Ecosystems, Ewha Womans University, Seoul, Korea, P12, 71, 2013
- 165) Extraction studies of U(VI) from sulphate solutions using amine based extractants: A comparative study, J.Y. Lee, **J. R. Kumar**, 243rd ACS National Meeting & Exposition on March 25-29, 2012, San Diego, USA, I&EC, 22, 2012
- 166) Solvent extraction of neodymium(III) from chloride solutions using mixture of tri-iso-octyl-amine and mono-thio-phosphinic acid, J. Y. Lee, B. N. Kumar, H. S. Jeon, B. R. Reddy, **J. R. Kumar**, 243rd ACS National Meeting & Exposition on March 25-29, 2012, San Diego, USA, I&EC, 108, 2012
- 167) Recovery of boron from brine by the solvent extraction method, C. J. Kim, **J. R. Kumar**, J. Y. Lee, H. S. Yoon, 243rd ACS National Meeting & Exposition on March 25-29, 2012, San Diego, USA, , I&EC, 180, 2012
- 168) Synergistic extraction and solvent extraction of uranium from sulfate solutions, **J. R. Kumar**, C. J. Kim, J. Y. Lee, J. S. Kim, H. S. Yoon, 141st Annual meeting & exhibition of TMS-2012 on March 11-15, Orlando, USA, W-98, 575, 2012
- 169) Green solvents for rare earths-An overview, **J. R. Kumar**, J. Y. Lee*, J. S. Kim, H. S. Yoon, 1st International Conference on Green Environmental Technology 2011, BEXCO, Busan, Korea, PD-08, 489-490, 2011
- 170) Separation of Light Rare Earths from Chloride Solutions by Liquid-Liquid Extraction Technique, **J. R. Kumar**, J. Y. Lee *, J. S. Kim, H. S. Yoon, The 6th International Conference on Separation Science and Technology (ICSST'2010), Changsha, Hunan, China, SIV, 227, 2010
- 171) Separation of Platinum from PGM's by Extraction Chromatographic Technique, J. Y. Lee *, **J. R. Kumar**, J. S. Kim, H. S. Yoon, The 6th International Conference on Separation Science and Technology (ICSST'2010), Changsha, Hunan, China, SIV, 251, 2010
- 172) Separation of rare earths (RE's) by Extraction Chromatography, J. Y. Lee *, J. S. Kim, **J. R. Kumar**, C. Han, The 6th International Conference on Separation Science and Technology (ICSST'2010), Changsha, Hunan, China, SIV, 252, 2010

- 173) Extraction and Separation of uranium(VI) and vanadium(V) from sulphuric acid solutions using Alamine 308 as an extractant, **J. R. Kumar**, J. Y. Lee, J. S. Kim*, H. S. Yoon, 94th Spring Academic Conference of The Korean Society for Geosystem Engineering, Jaeju, Korea, 460, 2010
- 174) Comparative Study of the Tetravalent Platinum by Solvent Extraction Using Alamine 336 and Cyanex 302 from Chloride Media, J. Y. Lee*, **J. R. Kumar**, J. S. Kim, J. S. Sohn, Spring conference of Korean Institute of Chemical Engineers, Jaeju, Korea, P-35, 2008
- 175) Tri-iso-octylamine as extractant for extraction and separation of platinum(IV)/rhodium(III), J. Y. Lee*, **J. R. Kumar**, J. S. Kim, J. S. Sohn, Atom conference of Korean Institute of Chemical Engineers, Pusan, Korea, 37, 153, 2008
- 176) Spectrophotometric Determination of Ni(II) using N-Ethyl-3-carbazolecarboxaldehyde thiosemicarbazone, C. Ramachandraiah, K. J. Reddy, **J. R. Kumar**, A. V. Reddy*, International Conference on Recent Advancements in Chemistry, Vellore, India, 41, 2006
- 177) Spectrophotometric Determination of V(V) present in Environmental Samples Using 3,4-Dihydroxybenzaldehyde isonicotinoyl hydrazone (3,4-DHBINH), S. L. Narayana, K. J. Reddy, **J. R. Kumar**, A. V. Reddy*, International Conference on Recent Advancements in Chemistry, Vellore, India, 42, 2006
- 178) Extraction and Separation of Hf(IV) from Acidic Chloride Solutions Using 4-Acylbis(1-phenyl-3-methyl-5-pyrazolones), K. J. Reddy, **J. R. Kumar**, M. L. P. Reddy, A. Varada Reddy*, International Conference on Recent Advancements in Chemistry, Vellore, India, 55-56, 2006

VII B. National conferences:

- 179) Current Global Trends and Future Visions of Hydrometallurgical Technologies for Sustainable Development, **J. R. Kumar***, 103rd Indian Science Congress-2016, University of Mysore, India, 2016
- 180) Recovery of rare earth metal from Korean monazite using alkaline roasting and acid leaching, A. Kumari, M. K. Jha, S. K. Saha, J. Hait, V. Kumar*, **J. R. Kumar**, Jin-Young Lee, 66th Annual Technical Meeting of the Indian Institute of Metals (NMD ATM 2012), Jamshedpur, India, 375, 2012
- 181) TG/DTA studies of the mixture of Korean monazite and sodium carbonate to get optimum condition for phosphate decomposition, A. Kumari M. K. Jha, S. K. Saha, J. Hait, V. Kumar*, **J. R. Kumar**, J. Y. Lee, 66th Annual Technical Meeting of the Indian Institute of Metals (NMD ATM 2012), Jamshedpur, India, 407, 2012
- 182) Leaching of Korean monazite for the recovery of rare earth metals, R. Panda, A. Kumari, J. Hait, S K Sahu, M. K. Jha, V. Kumar*, **J. R. Kumar**, J. Y. Lee, 66th Annual Technical Meeting of the Indian Institute of Metals (NMD ATM 2012), Jamshedpur, India, 408, 2012
- 183) Comparison of liquid-liquid extraction studies on platinum(IV) from acidic sulphate solutions using Alamine 336 and Cyanex 302 as an extractants, **J. R. Kumar***, J. Y. Lee, J. S. Kim, J. S. Sohn, Indian Analytical Sciences Congress 2008, Munnar, India, CP-9, 45, 2008
- 184) Liquid-liquid extraction studies of zirconium(IV) using 3-Phenyl-4-benzoyl-5-isoxalone in presence of neutral organophosphorus compounds, K. J. Reddy, **J. R. Kumar**, M. L. P. Reddy, A. V. Reddy*, Seminar on Recent Advancements in Chemistry, Annamalainagar, India, P91, 49, 2006
- 185) Homogeneous liquid-liquid extraction of hafnium(IV) from acidic chloride solutions using bis(2,4,4-trimethylpentyl) dithiophosphinic acid, **J. R. Kumar**, K. J. Reddy, B. R. Reddy, A. V. Reddy*, Seminar on Recent Advancements in Chemistry, Annamalainagar, India, P92, 49, 2006

- 186) Spectrophotometric determination of titanium(IV) using 3,4-dihydroxybenzaldehydeisonicotinoyl-hydrazone, S. L. Narayana, **J. R. Kumar**, K. J. Reddy, A. V. Reddy*, Seminar on Recent Advancements in Chemistry, Annamalainagar, India, P93, 49, 2006
- 187) Spectrophotometric determination of uranium(VI) using ortho-hydroxy-propiofenoneisonicotinoylhydrazone, C. Ramachandraiah, **J. R. Kumar**, K. J. Reddy, A. V. Reddy*, Seminar on Recent Advancements in Chemistry, Annamalainagar, India, P94, 50, 2006
- 188) Liquid-Liquid Extraction of Zr(IV) from Acidic Chloride solution Using Neutral Extractants Crown Ethers, K. J. Reddy, M. L. P. Reddy, **J. R. Kumar**, S. A. Reddy, A. V. Reddy*, National Seminar on the Role of Chemistry in Emerging Areas of Biology and Industries, Anantapur, India, OP-9, 20, 2006
- 189) Liquid Liquid Extraction of Hafnium(IV) from Acidic Chloride Solutions using 3-Phenyl-4-acyl-5-Isoxazolones as Extractants, **J. R. Kumar**, B. R. Reddy, K. J. Reddy, A. Varada Reddy*, National Seminar on the Role of Chemistry in Emerging Areas of Biology and Industries, Anantapur, India, PP-29, 74, 2006
- 190) Mixed-Ligand Chelate Extraction of Hafnium(IV) with 4-Acyl bis(1-Phnyl-3-methyl-5-pyrazolones) and Organophosphorus Compounds, K. J. Reddy, **J. R. Kumar**, M. L. P. Reddy, A. V. Reddy*, National Conference Role of Analytical Chemistry in Materials Science and Technology, Munnar, India, PP-43, 2006
- 191) Homogenous Liquid-Liquid Extraction of Zirconium(IV) From Acidic Chloride Solutions Using 3-Phenyl-4-benzoyl-5-isoxazolones and Organophosphorus Compounds, **J. R. Kumar**, B. R. Reddy, T. Thriveni, A. V. Reddy*, National Conference Role of Analytical Chemistry in Materials Science and Technology, Munnar, India, PP-44, 2006
- 192) N-ethyl-3-carbazolecarbaxaledehyde- thiosemicarbazone for spectrophotometric determination of copper(II) in leafy vegetables and pharmaceutical samples, C. Ramachandraiah, **J. Rajesh Kumar**, K. J. Reddy, A. Varada Reddy*, National Seminar on Role of Chemistry in Drug Development Strategies, Tirupati, India, 54–55, 2005
- 193) Sensitive extractive spectrophotometric determination of zinc in pharmaceutical and biological samples using N-ethyl-3-carbazolecarbaxaledehyde-thiosemicarbazone, K. J. Reddy, **J. R. Kumar**, C. Ramachandraiah, S. L. Narayana, A. V. Reddy*, National Seminar on Role of Chemistry in Drug Development Strategies, Tirupati, India, 40–41, 2005
- 194) Liquid-Liquid extraction studies of Zr(IV) from acidic chloride acid media using Pyrazalones, K. J. Reddy, **J. R. Kumar**, M. L. P. Reddy, A. V. Reddy*, National Seminar on Recent Trends in Analytical Techniques in Monitoring the Environment, Nuzvid, India, 55, 2005
- 195) Sensitive Extractive Spectrophotometric Determination of palladium(II) in synthetic mixures and hydrogenation catalyst, C. Ramachandraiah, **J. R. Kumar**, K. J. Reddy, A. V. Reddy*, National Seminar on Recent Trends in Analytical Techniques in Monitoring the Environment, Nuzvid, India, 43, 2005
- 196) Spectrophotometric Determination of Al(III) using Orthohydroxy propiofenone-isonicotinine-hydazone, C. Ramachandraiah, K. J. Reddy, **J. R. Kumar**, A. V. Reddy*, National Seminar on Recent Trends in Analytical Techniques in Monitoring the Environment, Nuzvid, India, 41, 2005
- 197) Sensitive Extractive Spectrophotometric Determination of Iron(III) with Pyrdioxal-4-phenyl-3-thiosemicarbazone, G. N. Ramesh, L. S. Sarma, **J. R. Kumar**, A. V. Reddy*, 18th Annual Conference of Indian Council of Chemists, Jalgon, India, 45, 1999

Personal Details:

Date of birth	June 11, 1974
Gender	Male
Nationality	Indian (Passport: Z4811168 expires on 01-08-2029)
Permanent Resident Status in South Korea	740611-5200598 (valid up to 2028-10-11)
Marital Status	Married and having two sons
Permanent Address in India	S/o Sri Jyothi Reddappa & Smt Jyothi Nagarajeswari Door Number: 4/1/1056-2, Anjaneya Nager Gopavaram (Mandal), Badvel Municipality Kadapa Dist., Andhra Pradesh, India Pin Code: 516 227 (BADVEL POST) Mobile phone: +91-98668-65061, +91-98665-44745
Home Address in South Korea	Plot Number 202, Jin Villa, 65-16 Sinseong-nam-ro Sinseong-dong, Yuseong-gu, Pin Code: 34116 Daejeon City, South Korea (Republic of Korea) Land phone at home: +82-42-861-4146, Mobile phone: +82-10-5773-0975