

# **Dr. Umesh B. Barache** M.Sc., B.Ed., Ph.D., SET

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## **Asst. Professor in Chemistry,**

School of Chemical Sciences,

P.A.H. Solapur University,

Solapur, MS, India.

Cell: 09822702688

E-mail: umesh.barache@gmail.com,

ubbarache@sus.ac.in



## **Permanent Address:**

2274, 'Ganga-Sant', Hede Galli,

Azad Chowk,

Barshi – 413 401.

Dist- Solapur, MS, India.

## **International Research Collaboration:**

We have International Research Collaboration with Prof. Dr. Angel G. Polanco Rodriguez, Sr. Scientist, Regional Research Center of the Autonomous University of Yucatan, Merida, Mexico.

## **Portfolios Handled:**

- Criteria In charge of NAAC (Criterion 6),
- Examination In charge (University Internal and External),
- Laboratory In charge,
- Head of Department,

## Education Details:

- December 2020 Qualified the SET examination in the subject of Chemistry.
- July 2018 Doctor of Philosophy (**Ph.D.**),  
P. A. H. Solapur University,  
Solapur, MS, India.  
Ph.D. Title – *Extraction and spectrophotometric  
determination of toxic metals.*  
(Doctoral advisor: Dr. S.H. Gaikwad).
- May 2012 Bachelor of Education (**B.Ed.**) *Science and Maths method*,  
P. A. H. Solapur University, Solapur.
- April 2007 Master of Science (**M.Sc.**) *Industrial Chemistry, 67.96%*,  
Department of Chemistry,  
Shivaji University, Kolhapur.
- April 2005 Bachelor of Science (**B.Sc.**) *Chemistry, 66.48%*,  
Department of Chemistry,  
Shri Shivaji Mahavidyalaya, Barshi.  
(Shivaji University, Kolhapur).

## Professional Experience:

I have both Industrial (as a Research Scientist in method development and validation) and Academic Experience (as an Asst. Professor, Laboratory In charge, Head of the Department at MIT College of Railway Engineering and Research, Barshi, Solapur, MS)

## Subjects Taught:

**For Graduate level:** Engineering Chemistry, Analytical & Industrial Chemistry, Inorganic Chemistry.

**For Post- Graduate Level:** Unit Processes in Chemical Technology, Instrumental Analysis, Advanced Topics in Industrial Chemistry, Unit Operations in Chemical Engineering.

**Research Interest:**

Solvent Extraction, Environmental Toxicity, Chromatography, Schiff's Bases, UV-visible Spectroscopy, Thin Films.

**Detailed Knowledge and Skills:**

- Chromatographic techniques: HPLC, GC, TLC.
- Spectroscopic methods: UV-visible, IR.
- Instrumental & Classical analysis.

**Chemistry Software and Computer Skills:**

Chromeleon, Class vp, ChemSketch, MS-Office (Word, Excel, Power point), LaTeX.

**Instruments Handled and Skills:**

- UV-visible spectrophotometer (*Shimadzu, Perkin Elmer*),
- IR spectrophotometer (*Shimadzu, Perkin Elmer*),
- Gas Chromatograph, GC (*Agilent & Shimadzu*),
- High Performance Liquid Chromatograph, HPLC (*Agilent, Waters, Dionex & Shimadzu*),
- Karl Fischer apparatus (*Metrohm*).

**Professional Links:**

**ORCID ID:** <https://orcid.org/0000-0001-7046-3164>

**Research Gate ID:** [https://www.researchgate.net/profile/Umesh\\_Barache](https://www.researchgate.net/profile/Umesh_Barache)

**Google Scholar ID:** <https://scholar.google.co.in/citations?user=SnUDHnkAAAAJ&hl=en>

**Membership of Professional Bodies:**

- **International Technology & Engineering Educators Association**
- **Institute For Engineering Research and Publication**

## Research Publications:

1. 4-(4'-Nitrobenzylideneimino)-3-methyl-5-mercapto-1, 2,4-triazole, a new chromogenic reagent for extractive spectrophotometric determination of copper(II) in pharmaceutical and alloy samples.

*South African Journal of Chemistry*, 69 (2016) 157-165 (S. African Chem. Society).



Doi: 10.17159/0379-4350/2016/v69a19

RESEARCH ARTICLE	A.B. Shaikh, U.B. Barache, M.A. Anuse and S.H. Gaikwad, <i>S. Afr. J. Chem.</i> , 2016, 69, 157-165, < <a href="http://journals.sabinet.co.za/sajchem/">http://journals.sabinet.co.za/sajchem/</a> >.	157
<b>4-(4'-Nitrobenzylideneimino)-3-methyl-5-mercapto-1, 2, 4-triazole, A New Chromogenic Reagent for Extractive Spectrophotometric Determination of Copper (II) in Pharmaceutical and Alloy Samples</b>		
Abdul B. Shaikh <sup>a</sup> , Umesh B. Barache <sup>a</sup> , Mansing A. Anuse <sup>b</sup> and Shashikant H. Gaikwad <sup>a,*</sup>		
<sup>a</sup> Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi, Dist. Solapur, (MS) India-413411.		
<sup>b</sup> Analytical Chemistry Laboratory, Shivaji University, Kolhapur, (MS) India-416004.		

2. Acid switched efficient, cost effective, selective separation and determination of selenium(IV).

*Journal of Environmental Chemical Engineering*, 5 (2017) 4828-4840 (Elsevier, UK).


Doi: 10.1016/j.jece.2017.09.021

	Contents lists available at <a href="http://www.sciencedirect.com">ScienceDirect</a>	
<b>Journal of Environmental Chemical Engineering</b>		
journal homepage: <a href="http://www.elsevier.com/locate/jece">www.elsevier.com/locate/jece</a>		
<b>Acid switched efficient, cost effective, selective separation and determination of selenium(IV)</b>		
Umesh B. Barache <sup>a</sup> , Abdul B. Shaikh <sup>a</sup> , Tukaram N. Lokhande <sup>a</sup> , Mansing A. Anuse <sup>b</sup> , Ganesh S. Kamble <sup>b,c</sup> , Vashishtha M. Gurame <sup>a</sup> , Shashikant H. Gaikwad <sup>a,*</sup>		
<sup>a</sup> Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi, 413411, Maharashtra, India		
<sup>b</sup> Analytical Chemistry Laboratory, Department of Chemistry, Shivaji University, Kolhapur, 416004, Maharashtra, India		
<sup>c</sup> Kolhapur Institute of Technology's, College of Engineering, Kolhapur, 416234, Maharashtra, India		

3. An efficient, cost effective, sensing behavior liquid-liquid extraction of copper(II) incorporated with 4-(4'-chlorobenzylideneimino)- 3-methyl-5-mercapto-1, 2, 4-triazole: Analysis of food samples, leafy vegetables, fertilizers and environmental samples.

*Spectrochimica Acta A*, **189** (2018) 443-453 (Elsevier, UK).

Doi: 10.1016/j.saa.2017.08.054



Contents lists available at ScienceDirect

**Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy**

journal homepage: [www.elsevier.com/locate/saa](http://www.elsevier.com/locate/saa)

An efficient, cost effective, sensing behaviour liquid-liquid extraction and spectrophotometric determination of copper(II) incorporated with 4-(4'-chlorobenzylideneimino)-3-methyl-5-mercapto-1, 2, 4-triazole: Analysis of food samples, leafy vegetables, fertilizers and environmental samples


Umesh B. Barache<sup>a</sup>, Abdul B. Shaikh<sup>a</sup>, Tukaram N. Lokhande<sup>a</sup>, Ganesh S. Kamble<sup>b,c</sup>, Mansing A. Anuse<sup>b</sup>, Shashikant H. Gaikwad<sup>a,\*</sup>

<sup>a</sup> Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi-413411, Maharashtra, India  
<sup>b</sup> Analytical Chemistry Research Laboratory, Department of Chemistry, Shivaji University, Kolhapur 416004, Maharashtra, India  
<sup>c</sup> Kolhapur Institute of Technology's, College of Engineering, Kolhapur 416234, Maharashtra, India

4. Selective and sensitive liquid-liquid extraction and spectrophotometric determination of tellurium(IV) using sulfur containing reagent.

*Chemical Data Collections* **19** (2019) 100173 (Elsevier, UK).

Doi:10.1016/j.cdc.2018.100173



Contents lists available at ScienceDirect

**Chemical Data Collections**

journal homepage: [www.elsevier.com/locate/cdc](http://www.elsevier.com/locate/cdc)

Selective and sensitive liquid-liquid extraction and spectrophotometric determination of tellurium(IV) using sulfur containing reagent


Umesh B. Barache<sup>a,\*</sup>, Balaji T. Khogare<sup>b</sup>, Abdul B. Shaikh<sup>a</sup>, Sachin A. Deodware<sup>a</sup>, Balasaheb N. Kokare<sup>b</sup>, Angel G. Polanco Rodriguez<sup>c</sup>, Tukaram N. Lokhande<sup>a</sup>, Shashikant H. Gaikwad<sup>a,\*</sup>

<sup>a</sup> Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi-413411, Maharashtra, India  
<sup>b</sup> Department of Chemistry, Smt. Meenalben Mehta College, Panchgani, Satara-412805, Maharashtra, India  
<sup>c</sup> Centro de Investigaciones Regionales "Dr. Hideyo Noguchi" de la Universidad Autónoma de Yucatán. Laboratorio de Medicina Social y Salud Pública, Av. Itzdes x 59 # 490, Col. Centro, Mérida, Yucatán 97000, México

5. Ion-pair based solvent extraction of rhodium(III) from malonate medium using 4-heptylaminopyridine as an extractant: application to alloys and environmentally relevant matrices.


*Analytical Chemistry Letters*, 8 (2018) 230-243 (Taylor and Francis, UK).

Doi:10.1080/22297928.2018.1449663



**Analytical  
Chemistry  
Letters**

## Analytical Chemistry Letters



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ISSN: 2229-7928 (Print) 2230-7532 (Online) Journal homepage: <http://www.tandfonline.com/loi/tacl20>


### Ion-Pair Based Solvent Extraction of Rhodium (III) from Malonate Medium Using 4-heptylaminopyridine as an Extractant: Application to Alloys and Environmentally Relevant Matrices

Balaji T. Khogare, Umesh B. Barache, Shashikant H. Gaikwad, Mansing A. Anuse, Pravina B. Piste & Balasaheb N. Kokare

6. Expeditious extraction and spectrophotometric determination of palladium(II) from catalysts and alloy samples using new chromogenic reagent.

*Rasayan Journal of Chemistry* 10 (2017) 967-980.

Doi:10.7324/RJC.2017.1031804



**RJC**

**RASĀYAN J. Chem.**  
Vol. 10 | No. 3 | 967 - 980 | July - September | 2017  
ISSN: 0974-1496 | e-ISSN: 0976-0083 | CODEN: RJCABP  
<http://www.rasayanjournal.com>  
<http://www.rasayanjournal.co.in>

### EXPEDITIOUS EXTRACTION AND SPECTROPHOTOMETRIC DETERMINATION OF PALLADIUM(II) FROM CATALYSTS AND ALLOY SAMPLES USING NEW CHROMOGENIC REAGENT

**A. B. Shaikh<sup>1</sup>, U. B. Barache<sup>1</sup>, T. N. Lokhande<sup>1</sup>, G. S. Kamble<sup>2</sup>,  
M. A. Anuse<sup>3</sup> and S. H. Gaikwad<sup>1,\*</sup>**

<sup>1</sup>Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi-413411, (MS) India

<sup>2</sup>Department of Engineering Chemistry, Kolhapur Institute of Technology's, College of Engineering, Kolhapur-416234 (MS) India

<sup>3</sup>Analytical Chemistry Research Laboratory, Department of Chemistry, Shivaji University, Kolhapur-416004 (MS) India

\*E-mail: [rasayanshg@gmail.com](mailto:rasayanshg@gmail.com)

7. A new experimental approach for liquid-liquid extractive spectrophotometric determination of chromium(VI) in tannery waste water and alloy samples

*International Journal of Environmental Analytical Chemistry* 99 (2019) 621-640  
(Taylor and Francis, UK).



Doi: 10.1080/03067319.2019.1607316.

INTERNATIONAL JOURNAL OF ENVIRONMENTAL ANALYTICAL CHEMISTRY  
<https://doi.org/10.1080/03067319.2019.1607316>

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ARTICLE Check for updates

**A new experimental approach for liquid-liquid extractive spectrophotometric determination of chromium(VI) in tannery wastewater and alloy samples**

Umesh B. Barache , Abdul B. Shaikh, Sachin A. Deodware, Pratibha C. Dhale, Tukaram N. Lokhande and Shashikant H. Gaikwad 

Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi, MS, India

8. Sensitive and selective liquid-liquid extractive spectrophotometric determination of bismuth(III) from water, pharmaceuticals and synthetic mixtures.

*Groundwater for Sustainable Development* 9 (2019) 100221 (Elsevier, UK).

Doi: 10.1016/j.gsd.2019.100221

Groundwater for Sustainable Development 9 (2019) 100221

Contents lists available at ScienceDirect

**Groundwater for Sustainable Development**

journal homepage: [www.elsevier.com/locate/gsd](http://www.elsevier.com/locate/gsd)

Research paper

**Sensitive and selective liquid-liquid extractive spectrophotometric determination of Bismuth(III) from water, pharmaceuticals and synthetic mixtures** Check for updates

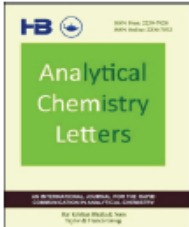
Umesh B. Barache<sup>a,\*</sup>, Abdul B. Shaikh<sup>a</sup>, Sachin A. Deodware<sup>a</sup>, Pratibha C. Dhale<sup>a</sup>, Ganesh S. Kamble<sup>b</sup>, Tukaram N. Lokhande<sup>a</sup>, Shashikant H. Gaikwad<sup>a,\*\*</sup>

<sup>a</sup> Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi, 413411, Maharashtra, India  
<sup>b</sup> Analytical Chemistry Research Laboratory, Department of Chemistry, Shivaji University, Kolhapur, 416004, Maharashtra, India

9. A new experimental design for liquid-liquid extractive spectrophotometric determination of gold(III) using 4-(4'-flurobenzylideneimino)-3-methyl-5-mercapto-1,2,4-triazole.

*Analytical Chemistry Letters*, 10 (2020) 336-356 (Taylor and Francis, UK).

Doi: 10.1080/22297928.2020.1776634



**Analytical Chemistry Letters**

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/tacl20>

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**A New Experimental Design for Liquid-Liquid Extractive Spectrophotometric Determination of Gold(III) Using 4-(4'-Flurobenzylideneimino)-3-methyl-5-mercapto-1,2,4-triazole**

Abdul B. Shaikh , Shashikant H. Gaikwad & Umesh B. Barache

10. Experimentally validated extractive spectrophotometric determination method of osmium(VIII) from environmental samples: Sequential separation of osmium(VIII), rhodium(III) and ruthenium(III).

*International Journal of Environmental Analytical Chemistry* 100 (2020) 621-640 (Taylor and Francis, UK).

Doi: 10.1080/03067319.2020.1792893.

INTERNATIONAL JOURNAL OF ENVIRONMENTAL ANALYTICAL CHEMISTRY  
<https://doi.org/10.1080/03067319.2020.1792893>



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ARTICLE 

**Experimentally validated extractive spectrophotometric determination method of osmium(VIII) from environmental samples: sequential separation of osmium(VIII), rhodium(III) and ruthenium(III)**

Shashikant H. Gaikwad <sup>a</sup>, Umesh B. Barache <sup>a</sup>, Tukaram N. Lokhande<sup>a</sup> and Mansing A. Anuse<sup>b</sup>

<sup>a</sup>Department of Chemistry, Chemistry Research Laboratory, Shri Shivaji Mahavidyalaya, Barshi, India;  
<sup>b</sup>Analytical Chemistry Research Laboratory, Department of Chemistry, Shivaji University, Kolhapur, India




11. Highly reproducible, simple and selective analytical method for extractive UV–visible spectrophotometric determination of ruthenium(III): Analysis of catalyst, fissium alloy and sequential separation.

*Spectrochimica Acta A 243 (2020) 118814 (Elsevier, UK).*

Doi: 10.1016/j.saa.2020.118814

Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 243 (2020) 118814


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Contents lists available at ScienceDirect

**Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy**

journal homepage: [www.elsevier.com/locate/saa](http://www.elsevier.com/locate/saa)




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Highly reproducible, simple and selective analytical method for extractive UV–visible spectrophotometric determination of ruthenium (III): Analysis of catalyst, fissium alloy and sequential separation


Abdul B. Shaikh<sup>a</sup>, Umesh B. Barache<sup>a,\*</sup>, Balaji T. Khogare<sup>b</sup>, Ritusmita Goswami<sup>c</sup>, Balasaheb N. Kokare<sup>d</sup>, Prakash P. Wadgaonkar<sup>e</sup>, Shashikant H. Gaikwad<sup>a,\*</sup>

<sup>a</sup> Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi 413401, Maharashtra, India  
<sup>b</sup> P.G. Department of Chemistry, Raje Ramrao Mahavidyalaya, Jath 416404, Maharashtra, India  
<sup>c</sup> Department of Environmental Science, The Assam Royal Global University, Guwahati 781035, Assam, India  
<sup>d</sup> Department of Chemistry, Smt. Meenalben Mehta College, Pandhigani-412805, Dist.-Satara, Maharashtra, India  
<sup>e</sup> Polymers and Advanced Materials Laboratory, Polymer Science and Engineering Division, CSIR-National Chemical Laboratory, Pune 411008, Maharashtra, India




12. 2-Chlorobenzaldehyde thiocarbohydrazone: A novel reagent for liquid-liquid extractive spectrophotometric determination of copper(II) from environmental and real samples.

*International Journal of Environmental Analytical Chemistry 101 (2021) (Taylor and Francis, UK).*



**International Journal of Environmental Analytical Chemistry**

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/geac20>



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**2-chlorobenzaldehyde thiocarbohydrazone:  
a novel reagent for liquid-liquid extractive  
spectrophotometric determination of copper(II)  
from environmental and real samples**


Ashwini V. Sadlapurkar, Umesh B. Barache, Abdul B. Shaikh, Shashikant H. Gaikwad & Tukaram N. Lokhande

13. Newly synthesized triazole-based Schiff base ligands and their Co(II) complexes as antimicrobial and anticancer agents: Chemical synthesis, structural and biological investigations.

*Results in Chemistry 3 (2021) 100162 (Elsevier, UK).*

Doi: 10.1080/03067319.2021.1912333


Results in Chemistry 3 (2021) 100162




Contents lists available at ScienceDirect

**Results in Chemistry**

journal homepage: [www.sciencedirect.com/journal/results-in-chemistry](http://www.sciencedirect.com/journal/results-in-chemistry)





**Newly synthesized triazole-based Schiff base ligands and their Co(II) complexes as antimicrobial and anticancer agents: Chemical synthesis, structure and biological investigations**


Sachin A. Deodware<sup>a</sup>, Umesh B. Barache<sup>a</sup>, Umakant B. Chanshetti<sup>b</sup>, D.J. Sathe<sup>c</sup>, Ubale Panchsheela Ashok<sup>d,e</sup>, Shashikant H. Gaikwad<sup>a,\*</sup>, Shiva Prasad Kollur<sup>f,g</sup>

<sup>a</sup> Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Barshi, Solapur 413 411, Maharashtra, India  
<sup>b</sup> Jawahar Arts, Science and Commerce College, Anadur, Osmanabad 413 501, Maharashtra, India  
<sup>c</sup> Department of Chemistry, Kolhapur Institute Technology's College of Engg. (Autonomous), Kolhapur 416 234, Maharashtra, India  
<sup>d</sup> Department of Chemistry, Rajaram College, Kolhapur 416 004, Maharashtra, India  
<sup>e</sup> N.K. Orchid College of Engineering and Technology, Solapur 413 002, Maharashtra, India  
<sup>f</sup> Department of Sciences, Amrita School of Arts and Sciences, Amrita Vishwa Vidyapeetham, Mysuru Campus, Mysuru 570 026, Karnataka, India

14. Organochlorine pesticides in the drinking water of Merida its metropolitan zone, a Karst region.


*Urban Water Journal (2021) (Taylor and Francis, UK) Published.*

Doi: 10.1080/1573062X.2021.1955279



**Urban Water Journal**

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/nurw20>



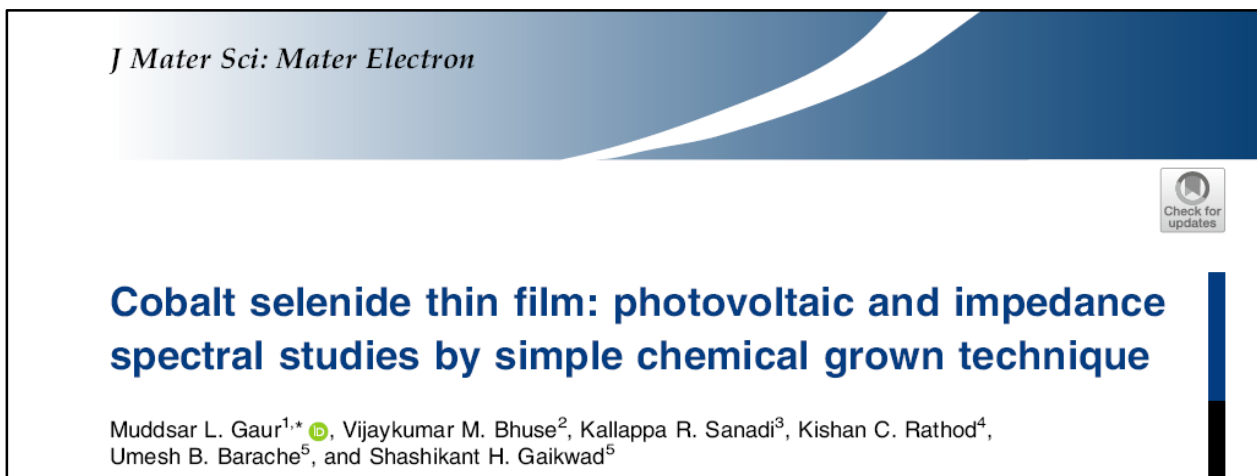
**Organochlorine pesticides in the drinking water of Merida and its Metropolitan Zone, a Karst Region**

Angel Gabriel Polanco Rodríguez, Jesús Alfredo Araujo León, Rafael López Cetz, Dave Long, Fernando José Álvarez Cervera, Umesh Barache & Daniel H. Rosas Sánchez

15. Cobalt Selenide Thin Film: Photovoltaic and Impedance Spectral Studies by Simple Chemical Grown Technique.

*Journal of Material Science (2021) (Springer, UK) Published.*

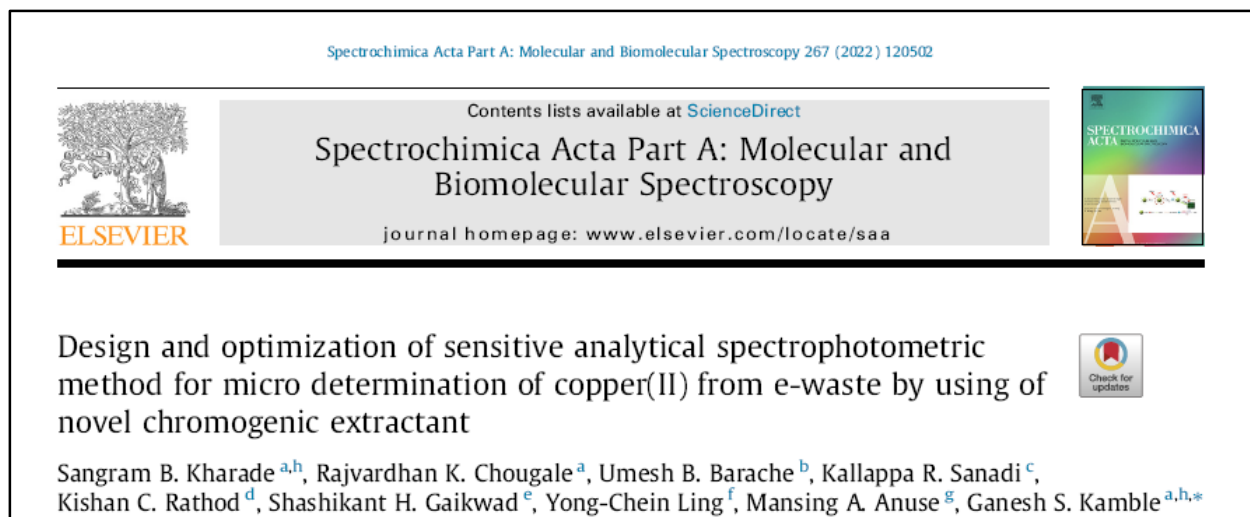
Doi: 10.1007/s10854-021-07035-6



16. Design and optimization of sensitive analytical spectrophotometric method for micro determination of copper(II) from e-waste by using of novel chromogenic extractant.

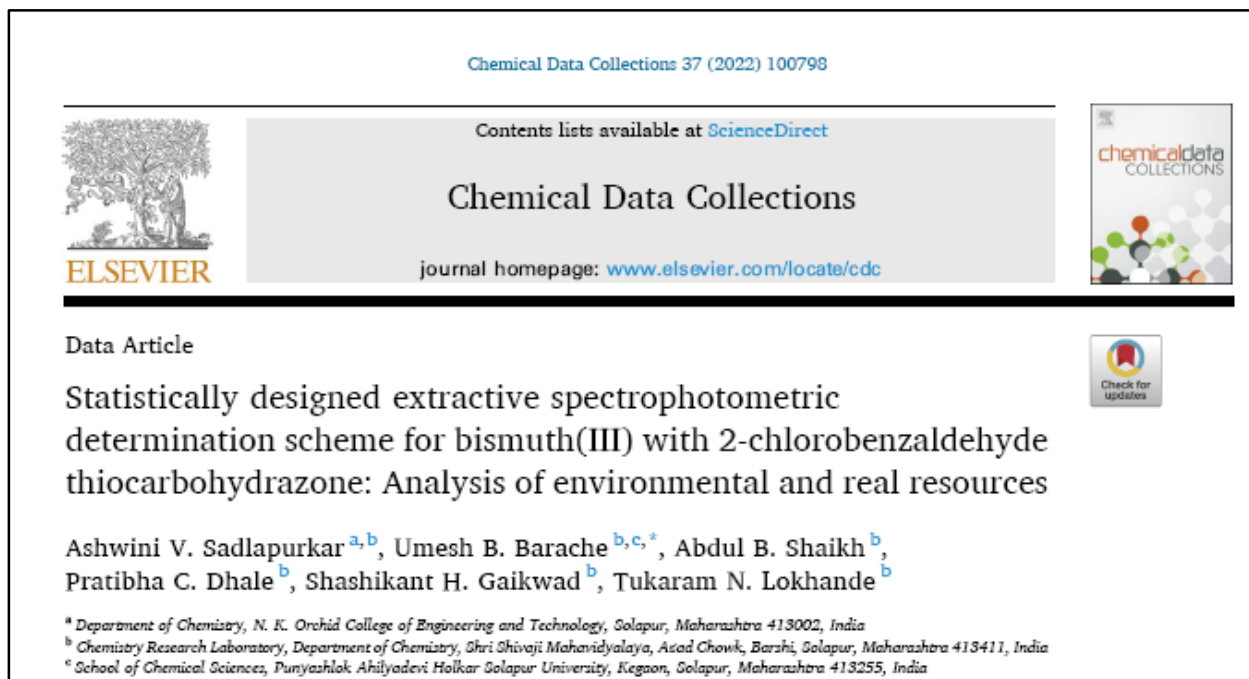
*Spectrochimica Acta A 267 (2020) 120502 (Elsevier, UK).*

Doi: 10.1016/j.saa.2021.120502



17. Statistically designed extractive spectrophotometric determination scheme for Bismuth(III) with 2-chlorobenzaldehyde thiocarbohydrazone: Analysis of environmental and real resources.

*Chemical Data Collections (2021) (Elsevier, UK) Accepted.*



Chemical Data Collections 37 (2022) 100798

Contents lists available at ScienceDirect

Chemical Data Collections

journal homepage: [www.elsevier.com/locate/cdc](http://www.elsevier.com/locate/cdc)

Data Article

Statistically designed extractive spectrophotometric determination scheme for bismuth(III) with 2-chlorobenzaldehyde thiocarbohydrazone: Analysis of environmental and real resources

Ashwini V. Sadlapurkar<sup>a,b</sup>, Umesh B. Barache<sup>b,c,\*</sup>, Abdul B. Shaikh<sup>b</sup>, Pratibha C. Dhale<sup>b</sup>, Shashikant H. Gaikwad<sup>b</sup>, Tukaram N. Lokhande<sup>b</sup>

<sup>a</sup> Department of Chemistry, N. K. Orchid College of Engineering and Technology, Solapur, Maharashtra 413002, India  
<sup>b</sup> Chemistry Research Laboratory, Department of Chemistry, Shri Shivaji Mahavidyalaya, Asad Chowk, Barshi, Solapur, Maharashtra 413411, India  
<sup>c</sup> School of Chemical Sciences, Punyashlok Ahilyadevi Holkar Solapur University, Kegaon, Solapur, Maharashtra 413255, India

18. Prevalence of Chromium in the Groundwater: Hydro-geochemistry, co- contaminants and concomitant health risk in Papum Pare District, Arunachal Pradesh, India.

*Environmental Monitoring and Assessment (2020) (Springer, UK) Accepted.*

19. Analytical optimization of liquid-liquid extractive spectrophotometric assessment protocol for platinum(IV): Analysis of environmental samples and cisplatin

*International Journal of Environmental Analytical Chemistry (2021) (Royal Society of Chemistry, UK) Revised.*

20. A rapid, highly selective chemo sensing protocol for direct and liquid-liquid extractive spectrophotometric determination of platinum with green approach.

*Journal of Analytical Chemistry (2021) (Springer, UK) Revised.*

21. Solvent extraction and separation of ruthenium(III) from malonate media by 4-heptylaminopyridine: Analysis of alloys and environmental matrices.

*Analytical Chemistry Letters (2021) (Taylor and Francis, UK) Communicated.*

22. Synthesis, characterization, antimicrobial and anticancer activity of Ni(II) complexes derived from mercaptotriazole.

*Journal of Coordination Chemistry (2021) (Taylor and Francis, UK) Communicated.*

### **Other Responsibilities:**

- Editor of “Exploratory Environmental Science Journal” – An International Journal.
- Reviewer of “Chemosphere” – An International Research Journal of Elsevier Publications, London, UK.
- Reviewer of “Arabian Journal of Chemistry” – An International Research Journal of Elsevier Publications, London, UK.
- Reviewer of “Arabian Journal of Chemistry” – An International Research Journal of Elsevier Publications, London, UK.
- Reviewer of “Analytical Methods” – An International Research Journal of Royal Society of Chemistry, London, UK.
- Reviewer of “Food and Function” – An International Research Journal of Royal Society of Chemistry, London, UK.
- Reviewer of “Macromolecular Symposia” – An International Research Journal of Wiley Publications, London, UK.
- Reviewer of “International Journal of Environmental Analytical Chemistry” – An International Research Journal of Taylor & Francis Group, England, UK.
- Reviewer of “Urban Water Journal” – An International Research Journal of Taylor & Francis Group, England, UK.
- Reviewer of “Vietnam Journal of Chemistry” – An International Research Journal of Wiley Publications, London, UK.
- Reviewer of “African Journal of Pure and Applied Chemistry” – An International Research Journal of Academic Journals, South Africa.
- Reviewer of “Analytical Chemistry Letters” – An International Research Journal of Taylor & Francis Group, England, UK.
- Reviewer of “SN Applied Sciences” – An International Research Journal of Springer Nature Group, USA.

- Reviewer of “Journal of Medicine and Life” – An International Research Journal of from Europe.
- Reviewer of “Mediterranean Journal of Chemistry” – An International Research Journal of University of Ibn Tofail Faculty of Sciences Kenitra, Morocco.
- Reviewer of “Macromolecular Symposia.” – An International Research Journal of Wiley Group, UK.
- Reviewer of “Journal of Toxicology and Environmental Health Sciences” – An International Research Journal of Academic Journals, South Africa.
- Reviewer of “Egyptian Journal of Microbiology” – An International Research Journal of Egyptian Society of Applied Microbiology.
- Internal/ External Sr. Supervisor for Theory examinations of P.A,H. Solapur University.
- Team Manager for “Avishkar” Research festivals and Youth festivals of Solapur University.

#### **Papers Presented/ Attended in Conferences/ Seminars/ Workshops:**

1. Participated and worked as a volunteer in a State Level workshop on **Laboratory Safety and Good Laboratory Practices** organized by Shri Shivaji Mahavidyalaya, Barshi, on 24<sup>th</sup> November, 2013.
2. “Extractive spectrophotometric determination of bismuth(III) in alloy samples using 1-amino-4,4,6-trimethyl (1H,4H) pyrimidine-2-thiol” presented paper (poster) in International Conference, **Emerging Horizons in Biochemical Sciences and Nanomaterials (EHBCSN-2013)**, held at Shri Shivaji Mahavidyalaya, Barshi, 28-30<sup>th</sup> November, 2013.
3. “Analysis of physic-chemical parameters of the soil samples area around Chandani river in Osmanabad district of Maharashtra” presented paper (poster) in International Conference, **Emerging Horizons in Biochemical Sciences and Nanomaterials (EHBCSN-2013)**, held at Shri Shivaji Mahavidyalaya, Barshi, 28-30<sup>th</sup> November, 2013.
4. Poster presentation on paper entitled, “New green procedure for extractive spectrophotometric determination of Cu(II) and its applications to analysis of synthetic mixtures and pharmaceutical samples” at International Conference on **Green Chemistry**,

**Catalysis, Energy and Environment (ICGC-2015)** held at Goa University, Goa during 22-24<sup>th</sup> January, 2015.

5. Attended the one day Seminar on **Strengthening Re-Accreditation Awareness** organized by IQAC, Sangameshwar College, Solapur on 19<sup>th</sup> April, 2015.
6. “Rapid extractive spectrophotometric determination of copper(II) using 4-(4'-chlorobenzylidene imino)-3-methyl-5-mercapto-1,2,4-triazole” presented paper (poster) in, International Conference on **Opportunities and Challenges Before 21<sup>st</sup> Century India** held at Rajarshi Chhatrapati Shahu College, Kolhapur during 6-7<sup>th</sup> February, 2016.
7. “Synthesis, physico-chemical, thermal, antimicrobial and anticancer investigations of newly synthesized Co(II), Ni(II) and Cu(II) complexes of N and S donor Schiff bases” presented paper (poster) in, International Conference on **Opportunities and Challenges Before 21<sup>st</sup> Century India** held at Rajarshi Chhatrapati Shahu College, Kolhapur during 6-7<sup>th</sup> February, 2016.
8. Achieved **First Prize** on paper entitled “Extractive spectrophotometric determination of platinum(IV) using sulfur containing reagent” in a National Level Technical Event and Paper Presentation Competition organized by Bhagwant Institute of Technology, Barshi held on 22-23<sup>rd</sup> February, 2016.
9. Attended the one day State Level workshop on **Ensuring Quality in Higher Education: Opportunities and Challenges** hosted by Mauli Mahavidyalaya, Wadala, Solapur on 27<sup>th</sup> September, 2016.
10. Poster presentation on paper entitled, “ Simple, rapid and selective extraction and spectrophotometric determination of bismuth(III) from alloy, pharmaceutical and environmental samples by complexation with 4-(4'-chlorobenzylideneimino)-3-methyl-5-mercapto-1,2,4-triazole as a sensitive reagent” in State Level Seminar on **Environment and Chemistry** held at Mahatma Phule Nutan Mahavidyalaya, Mirajgaon, Karjat during 29-30<sup>th</sup> September, 2016.
11. Oral and Poster presentation on paper entitled, “Extractive spectrophotometric determination of selenium using 4-(4'-chlorobenzylideneimino)-3-methyl-5-mercapto-1,2,4-triazole” at **Solapur University ‘Avishkar’ Research Festival** hosted by Walchand Institute of Technology, Solapur during 29-30<sup>th</sup> December, 2016.

12. Oral presentation entitled, "Simple and rapid liquid-liquid extraction and spectrophotometric determination of selenium(IV) in environmental samples" at One day National Seminar on **Recent Trends in Nanomaterials and its Applications (RTNA-2017)** held at Vidnyan Mahavidyalaya, Sangola on 21<sup>st</sup> January, 2017.
13. "Rapid extractive spectrophotometric determination of tellurium(IV) using 4-(4'-chlorobenzinylidene imino)-3-methyl-5-mercapto-1,2,4-triazole as a chromogenic reagent" presented paper (poster) in National Conference on **Innovative Research in Chemical Sciences (IRCS-2017)** held at Shivaji University, Kolhapur during 1-2<sup>nd</sup> February, 2017.
14. Got **Second Prize** on paper entitled "Application of sulphur containing reagent for extraction and determination of palladium(II)" in **Aarambh**, a National Level Technical Event held at Bhagwant Institute of Technology, Barshi during 2-3<sup>rd</sup> March, 2017.
15. "Simple, rapid and selective liquid-liquid extraction and spectrophotometric determination of micro amount of ruthenium(III) by using 4-(4'-fluorobenzinylidene imino)-3-methyl-5-mercapto-1,2,4-triazole (FBIMMT) as a novel chromogenic reagent", presented paper (poster) in National Conference on **Innovations in Chemistry (IC-2017)** held at D.B.F. Dayanand College of Arts and Science, Solapur on 30<sup>th</sup> April, 2017.
16. Poster presentation on paper entitled "Acid switched efficient, cost effective liquid-liquid extraction and spectrophotometric determination of selenium(IV) by using 4-(4'-chlorobenzinylideneimino)-3-methyl-5-mercapto-1,2,4-triazole as a reagent: Analysis of environmental, pharmaceutical samples and synthetic mixtures" in **21<sup>st</sup> National Symposium in Chemistry** held at CSIR-Indian Institute of Chemical Technology, Hyderabad during 13-16<sup>th</sup> July, 2017.
17. "Expenditious extraction and spectrophotometric determination of palladium(II) using new chromogenic reagent 4-(4'-fluorobenzinylideneimino)-3-methyl-5-mercapto-1,2,4-triazole from catalysts and alloy samples" presented paper (poster) in **21<sup>st</sup> National Symposium in Chemistry** held at CSIR-Indian Institute of Chemical Technology, Hyderabad during 13-16<sup>th</sup> July, 2017.
18. Participated in the One day State Level Workshop on "**Google Forms and Corel Draw**" held at MIT College of Railway Engineering and Research on 27<sup>th</sup> September 2017.



19. "Ultrafast liquid-liquid extractive spectrophotometric determination of hexavalent chromium" presented paper (poster) in National Conference on **Recent Advances in Chemical Sciences (RACS-2017)** held at Solapur University, Solapur on 26<sup>th</sup> November, 2017.
20. Got **First Prize** on paper entitled, "Ultra trace extraction of tetravalent selenium and its determination by spectrophotometry from environmental matrices using sulphur containing reagent" at **Solapur University 'Avishkar' Research Festival** hosted by S. K. N. Sinhagad Engineering College, Pandharpur during 27-28<sup>th</sup> December, 2017.
21. Poster and oral presentation on paper entitled, "Ultra trace extraction of tetravalent selenium and its determination by spectrophotometry from environmental matrices using sulphur containing reagent" at **Maharashtra State Inter-University 'Avishkar' Convention** hosted by Mahatma Phule Agricultural University, Rahuri during 15-17<sup>th</sup> January, 2018.
22. Got **First Prize** on paper entitled "CBIMMT: A Sulphur containing promising reagent for determination of toxic metal ions in environmental samples" in '**TECH-BITS 2K18**', a National Level Technical and Paper Presentation Event organized by Bhagwant Institute of Technology, Barshi during 30-31<sup>st</sup> January, 2018.
23. Got **First Prize** on paper entitled "Application of sulphur containing reagent for extraction and determination of toxic metals" in '**Aarambh**', a National Level Technical Event held at Bhagwant Institute of Technology, Barshi during 26-27<sup>th</sup> February, 2018.
24. Participated in the One day State Level Workshop on "**Google Forms and QR Codes**" held at MIT College of Railway Engineering and Research on 28<sup>th</sup> February 2018.
25. "Extractive spectrophotometric determination study on chromium(VI) in hydrochloric acid medium" presented paper (poster) in DAE-BRNS eighth biennial symposium on **Emerging Trends in Separation Science and Technology (SESTEC-2018)** held at Birla Institute of Technology and Science, Vasco de Gama, Goa during 23-26<sup>th</sup> May, 2018.
26. "Rapid and selective spectrophotometric determination of Ru(III) from synthetic mixtures, fissium alloy and catalysts" presented paper (poster) in DAE-BRNS eighth biennial symposium on **Emerging Trends in Separation Science and Technology**

- (SESTEC-2018) held at Birla Institute of Technology and Science, Vasco de Gama, Goa during 23-26<sup>th</sup> May, 2018.
27. Participated and worked as a volunteer in a State Level seminar on **Chemistry: The Mirror of Industry (CMI-2018)** organized by Shri Shivaji Mahavidyalaya, Barshi, on 30<sup>th</sup> June, 2018.
  28. “Sensitive and selective liquid-liquid extractive dual wavelength spectrophotometric determination of bismuth(III) from water and real samples and synthetic mixtures” presented paper (poster) in **International Conference on Chemistry, Environment and Energy (ICCEE-2019)** held at Y. C. Institute of Science, Satara during 16-18<sup>th</sup> February, 2019.
  29. “Mercapto triazole cobalt complexes: Most promising antimicrobial and anticancer agents” presented paper (poster) in **International Conference on Chemistry, Environment and Energy (ICCEE-2019)** held at Y. C. Institute of Science, Satara during 16-18<sup>th</sup> February, 2019.
  30. Participated and worked as a volunteer in a State Level Workshop on **Applications of Chemistry in Forensic Sciences (ACFS-2019)** organized by Shri Shivaji Mahavidyalaya, Barshi, on 21<sup>st</sup> February, 2019.
  31. Participated in two days National Level Workshop on **“LaTeX: A Document Preparation System”** hosted by Sanjay Ghodawat Group of Institutions, Atigre, Kolhapur on 15-16<sup>th</sup> March, 2019.
  32. “Mercapto triazole cobalt complexes: Most promising antimicrobial and anticancer agents” presented paper (poster) in **National Conference on Emerging Trends in Pharmaceutical Chemistry, Environment and Energy (EPTC-2020)** held at D.B.F. Dayanand College of Arts and Science, Solapur during 24-25<sup>th</sup> January, 2020.
  33. Participated in the Faculty Development Program (FDP) on **Digital Marketing** arranged by Tilak College of Science and Commerce, Vashi, Navi Mumbai on 3<sup>rd</sup> May, 2020 (online).
  34. Participated in the webinar on **Data Analytics- Innovative Research Methods and Data Analysis** conducted by Vignan's Institute of Management and Technology for Women, Hyderabad on 23<sup>rd</sup> May 2020.

35. Participated in the virtual seminar on **Protect Nature for Sustainable Development** conducted by Royal Global University, Guwahati, Assam on 05<sup>th</sup> June 2020.
36. Participated in the International webinar on **Strories from Material Science Playground and Practical Applications** organized by Punyashlok Ahilyadevi Holkar Solapur University, Solapur on 16<sup>th</sup> December 2021.

### **Personal Information/ Details:**

<b>Nationality:</b>	Indian	<b>Blood Group:</b>	O +ve
<b>Gender:</b>	Male	<b>Birth Date:</b>	14 <sup>th</sup> July 1984
<b>Marital Status:</b>	Married	<b>Languages Known:</b>	Marathi, Hindi & English.

### **References:**

- 1. Dr. S. H. Gaikwad,**  
Professor,  
Dept. of Chemistry,  
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**Barshi, MS, India.**
- 2. Prof. R.B. Bhosale,**  
Professor and Director,  
School of Chemical Sciences,  
P.A.H. Solapur University,  
**Solapur, MS, India.**
- 3. Dr. Despo Fatta-Kassinis,**  
Director,  
Nireas International Water  
Research Centre,  
**Nicosia, Cyprus, Europe.**
- 4. Dr. Angel G. P. Rodriguez,**  
Scientist,  
Regional Centre for Investigation,  
Autonomous University of Yucatan,  
**Merida, Salud Publica, Mexico.**
- 5. Prof. Prosun Bhattacharya,**  
Professor & Chief Scientist,  
KTH Royal Institute of Technology,  
**Stockholm, Sweden, Europe.**