ANNUAL INTERNAL QUALITY ASSESSMENT STATUS REPORT

Name of the School: School of Chemical Sciences
Year of Report: 2011-2012

Part A: The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year.

IQAC conceived of integrating contemporary knowledge with the curriculum imparted to the students so that frontiers of the Chemical Sciences are meaningfully explored. The plan of action chalked out to meet this objective relied heavily on modernization of curriculum, organization of National Seminar with lectures and corresponding brain storming sessions and procurement of sophisticated equipments. Consequently, exhaustive revision on curriculum was undertaken to take care of the knowledge gaps and to address the relevant issues and the School has purchased FTIR and UV-Vis. Spectrophotometer. The school successfully organized a National Seminar on the theme entitled “Emerging Trends in Chemical Sciences” in 2012 and academic fraternity of entire University was benefited by this exercise.

Part B:

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<tbody>
<tr>
<td>1.</td>
<td>Activities reflecting the goals and objectives of the institution</td>
<td>To explore new horizons of knowledge in chemical sciences and to blend it effectively in academic curricula for overall educational purpose.</td>
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<td></td>
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<td>To fulfill these goals and objectives, we have undertaken following activities.</td>
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<td>- Rigorous teaching with teaching adds.</td>
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<td>- Strong emphasis on research activities.</td>
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<td>- Encouragement to the students to undertake challenging assignments.</td>
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<td>- Seminar presentation by students.</td>
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<td>2.</td>
<td>New academic programmes initiated (UG and PG)</td>
<td>None</td>
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<td>3.</td>
<td>Innovations in curricular design and transaction</td>
<td>- Curriculum of M.Sc. Chemistry, Applied Chemistry and Pharmaceutical Chemistry has been substantially revised for session 2011-12 and onwards.</td>
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<td>- New experiments have been added.</td>
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<td>4.</td>
<td>Inter-disciplinary programmes started</td>
<td>In all M.Sc. programmes interdisciplinary papers such as Mathematics for Chemists, Biology for Chemists and Computer Applications have been included</td>
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<td>5.</td>
<td>Examination reforms implemented</td>
<td>Semester system is followed in its true spirit. Answer sheets are shown to the students after evaluation.</td>
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<td>6.</td>
<td>Candidates qualified NET/SLET/GATE etc.</td>
<td>No of students selected through NET / GATE: NET = 02; GATE: 01</td>
</tr>
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</table>
| 7. | Initiative towards faculty development programme | Faculty members have interacted with eminent scientists.  
   |   | Prof. B. Vishwanathan, IIT Madras  
   |   | Prof. Deepak Gupta, IIT Kanpur  
   |   | Prof. P. Yogeshwari, BITS Pilani, Hyderabad  
   |   | Prof. Akhilesh Verma, University of Delhi |
| 8. | Total number of seminars / workshops conducted | The school organized a National Seminar on the theme entitled “Emerging Trends in Chemical Sciences” in 2012 |
| 9. | Research projects  
a) Newly implemented:  
b) Completed: | See Annexure I  
   |   | On going: 02  
   |   | Completed: 06 |
| 10. | Patents generated if any | Nil |
| 11. | New collaborative research programmes | See Annexure II |
| 12. | Research grants received from various agencies | See Annexure I |
| 13. | Details of research scholars | Students with fellowships: 05  
   |   | Students without fellowship: 18  
   |   | Rajiv Gandhi National fellowship: 01 |
| 14. | Citation index of faculty members and impact factor | See list of publications of faculty members with impact factor.  
<p>|   | See Annexure III |
| 15. | Honors/Awards to the faculty | Prof. Ashok Kumar (in Faculty category) and Mr. Pankaj Patidar (in Student Category) have been awarded by “Best Science Research Award of MPCST in 2012” |
| 16. | Internal resources generated | Departmental Fees |
| 17. | Details of departments getting SAP, COSIST (ASSIST) / DST.FIST, etc. assistance/recognition | Rs. 30 lakhs as FIST support from DST |
| 18. | Community services | Faculty, students and non teaching staff participated in plantation activities |
| 19. | Teachers and officers newly recruited | None |
| 20. | Teaching-Non-teaching staff ratio | Ratio: 11:19 (as per sanctioned posts) |
| 21. | Improvements in the library services | New books with latest titles have been added in the Library. |</p>
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<td><strong>22.</strong></td>
<td>New books/journals subscribed and their value</td>
<td>Procurement of various standard books has been done from time to time and facility of various International Journals has been provided for all faculty members and Research scholars through Science Direct.</td>
</tr>
<tr>
<td><strong>23.</strong></td>
<td>Courses in which student assessment of teachers is introduced and the action taken on student feedback</td>
<td>Student’s feedback was analyzed. Overall rating of the faculty members was very good.</td>
</tr>
</tbody>
</table>
| **24.** | Unit cost of education | Unit Cost = Total annual expenditure budget (Actual) divided by the number of students enrolled  
About Rs. 1.15 Lakh per student |
| **25.** | Computerization of administration and the process of admissions and examination results, issue of certificates | • All the results of the semester examination grade sheets are prepared on the computer.  
• All day to day letters, Dept profiles, data asked from the University are prepared on the computer. |
| **26.** | Increase in the infrastructural facilities | New equipments such as FTIR and UV-Vis spectrophotometer have been purchased to augment the research activity of the School and facilities for M.Sc. practical. |
| **27.** | Technology up gradation | Networking facility through IT center has been provided to facilitate teaching and research. |
| **28.** | Computer and internet access and training to teachers and students | Yes |
| **29.** | Financial aid to students | Scholarship to SC/ST students is provided by state Government for M.Sc students. |
| **30.** | Activities and support from the Alumni Association | Alumni help the students to find opportunities of research and jobs. |
| **31.** | Activities and support from the Parent Teacher Association | None |
| **32.** | Health services | Students are provided health centre facility by the University. |
| **33.** | Performance in sports activities | Students participated in the sports activity organized by UTD sports association. |
| **34.** | Incentives to outstanding Sports persons | None |
| **35.** | Student achievements and awards | • Mr. Pankaj Patidar has been awarded by “Best
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|   |   | **Science Research Award of MPCST in 2012**  
- Mr. Sunil Patidar and Mr. Dileep Singh Sisodiya won the award in Quiz competition organized by MPCST in 2012. |
| 36. | Activities of the Guidance and Counseling unit | Faculty members guide the students from time to time on various issues including research opportunities and preparation for NET/GATE exam. |
| 37. | Placement services provided to students | Faculty members guide the students for job opportunities in academic Institutions and Industries. |
| 38. | Development programmes for non-teaching staff | None |
| 39. | Healthy practices of the institution | - Regular and quality teaching  
- Active participation in research activity |
| 40. | Linkages developed with National/International, Academic/Research bodies | See Annexure II |
| 41. | Any other relevant information the institution wishes to add | School’s mission is to provide high quality education and training for high flying careers in Chemical Sciences. Our distinguishing features are:  
- Theoretical and practical knowledge of Instrumental Techniques.  
- Interpretation of various types of spectra. Nuclear Magnetic Resonance (NMR) Electron Spin Resonance (ESR), Infrared (IR), Ultraviolet-Visible (UV-Visible), Mössbauer, Mass Spectrometry.  
- The strength of the School has been and continues to be excellence in research and teaching.  
- The faculty is extremely well qualified and motivated with a strong commitment to research. |

(PART – C)

**Detail the plans of the institution for the next year:**

**Yearly plan: 2012 -2013**

**Curriculum**
- It is planned to increase the diversity in spectral interpretation w.r.t. new examples and relevant patterns.
• The syllabus is revised generally in the beginning of the session to include recent advancements.

**Strategies of Teaching Learning**
Use of teaching aids to be encouraged and novel methods of learning such as quiz to be adopted as and when applicable.

**Student Feedback System Design**
Students’ feedback about the School, faculty members and the curriculum would be practiced as per IQAC design.

**Collection of Feedback and its Analysis: Format of Analysis**
Feedback will be collected by Dec 2012 and May 2013 and will be analyzed by faculty members. The overall report will be prepared and necessary improvements will be done for coming year.

**Improvement Plan**

**Infrastructure**
New building for School of Chemical Sciences needs to be constructed on high priority basis.

**Research Activities and Promotion**
• Faculty members would be encouraged to participate in seminars and conferences
• Collaborative research activities will be promoted.

Name and Signature of the Coordinator QAC

Name and Signature of the HEAD

Annexure I
## Details of research grant received from different agencies during the last five years: 2007-2012

<table>
<thead>
<tr>
<th>Name of the Investigator</th>
<th>Title of the project and duration</th>
<th>Status</th>
<th>Amount sanctioned</th>
<th>Funding agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. R. Prasad</td>
<td>Surface and catalytic studies of nanocrystalline and nanoporous metal oxides Studies of few catalytic vapourphase alkylation and cyclization reactions.</td>
<td>Completed</td>
<td>Rs. 3,06,000/-</td>
<td>CSR-CRS</td>
</tr>
<tr>
<td>Dr. Ashok Kumar</td>
<td>Synergistic extraction and spectrophotometric determination of toxic metal ions and lanthanides at trace level by chromogenic substituted calix(n) arenes. Synergistic extraction and stripping voltammetric determination of toxic metal ions and lanthanides at trace level.</td>
<td>Completed</td>
<td>Rs. 10,46,000/-</td>
<td>CSIR</td>
</tr>
<tr>
<td>Dr. H.P.S. Chauhan</td>
<td>Synthetic, Spectroscopic, Thermal and Biochemical Studies on some Group 14 (Si, Ge and Sn) and Group 15 (As, Sb and Bi) Metal and Organometallic Complexes with some sulphur and/or Oxygen Donor Organic Ligands</td>
<td>Completed</td>
<td>Rs. 4,11,100/-</td>
<td>UGC</td>
</tr>
<tr>
<td>Dr. Pratibha Sharma</td>
<td>Design, Synthesis, Electrochemical Studies and Evaluation of Therapeutic Potential of Purines and Benzimidazoles Through Quantitative Structure - Activity Relationship</td>
<td>Completed</td>
<td>Rs. 14,94,000/-</td>
<td>DRDO</td>
</tr>
<tr>
<td>Dr. R. Prasad</td>
<td>Quantum Mechanical and Molecular Mechanics Computation of few molecules, Reactions and Nano materials</td>
<td>Ongoing</td>
<td>Rs. 2,95,000</td>
<td>MPCST, Bhopal</td>
</tr>
<tr>
<td>Dr. H.P. S. Chauhan</td>
<td>Group 15 Metal and Organometallic Derivatives with Mixed Sulphur and/or Oxygen Donor Ligands: Synthesis and Characterization: Thermal and Biochemical Studies</td>
<td>Ongoing</td>
<td>Rs. 8,04,800</td>
<td>UGC, New Delhi</td>
</tr>
</tbody>
</table>
Annexure II

International Collaboration of the Professors:

**Dr. K.K. Pandey**

**Collaborative Research work with European and American Scientists**

1. Prof. H.W. Roesky  
   Institute of Inorganic Chemistry  
   University of Gottingen, Germany

2. Prof. G.M. Sheldrick  
   Institute of Inorganic Chemistry  
   University of Gottingen, Germany

3. Prof. B. Krebs  
   Institute of Inorganic Chemistry  
   University of Munster, Germany

4. Prof. J.W. Bats  
   Institute of Crystallography and Mineralogy  
   University of Frankfurt, Germany

5. Prof. G. Frenking  
   Faculty of Chemistry  
   University of Marburg, Germany

6. Prof. Philip P. Power  
   Department of Chemistry  
   University of California Davis, USA

7. Prof. Agusti Lledos  
   Department of Chemistry  
   University of Autonoma Barcelona, Spain

8. Prof. F. Maseras  
   Institute of Chemical Research of Cataonia (ICIQ)  
   Tarragona, Spain

9. Dr. D.G. Musaev
Director
Emerson Center for Scientific Computation
Emory University, Atlanta, Georgia, USA

10. Prof. D.C. Liotta
   Editor: J. Medicine Chem. Letters (American Chemical Society, USA)
   Department of Chemistry
   Emory University, Atlanta, Georgia, USA

11. Prof. Simon Aldridge
    Department of Chemistry
    Oxford University, UK

12. Prof. Holger Braunschweig
    Department of Chemistry
    University of Würzburg, Germany

13. Prof. Alexander C. Filippou
    Department of Chemistry
    University of Bonn, Germany
Annexure III

SCHOOL OF CHEMICAL SCIENCES
DEVI AHILYA UNIVERSITY INDORE

PUBLICATION During the Period 2007 - July 2012

DR. KRISHNA K. PANDEY

1. Energy Analysis of Metal-Metal Bonding in [RM-MR] (M = Zn, Cd, Hg; R = CH₃, SiH₃, GeH₃, C₅H₅, C₅Me₅)
   Krishna K. Pandey
   Impact Factor: 2.384

2. Structure and Coordinate Bonding Nature of the Rhenium-σ-borane complexes
   Krishna K. Pandey
   Impact Factor: 1.288

3. Structure and coordinate bonding nature of the manganese-σ-borane complexes
   Krishna K. Pandey
   Impact Factor: 2.384

4. Transition Metal-Carbon Complexes. A Theoretical Study
   Andreas Krapp, Krishna K. Pandey and Gernot Frenking
   Impact Factor: 9.099

5. Structure and energy decomposition analysis of metal-metal bonding in [PhM-MPh] and [ClM-MCl] (M = Zn, Cd, Hg)
   K.K. Pandey
   Impact Factor: 1.288

6. Stretched σ-borane complexes of rhodium: A theoretical study
   K.K. Pandey
   Impact Factor: 1.972

7. σ-Borane complexes of nickel, palladium and platinum. A theoretical study
   K.K. Pandey
   Impact Factor: 1.288
8. Mixed-ligand Ru(II) complexes with 2,2’-bipyridine and tetradebate Schiff bases ligands: Synthesis, physico-chemical study, DFT analysis, electrochemical and Na binding properties
L. Mishra, R. Prajapati, K.K. Pandey
**Impact Factor:** 1.952

9. Transition Metal sigma-borane complexes
K.K. Pandey
**Impact Factor:** 12.110

10. Linear M≡E- Me Versus Bent M-E- Me: Bonding Analysis in Heavier Metal- ylidyne Complexes [(Cp)(CO)2M≡EMe] and Metallo-yldienes [(Cp)(CO)3M-EMe] (M = Cr, Mo, W; E = Si, Ge, Sn, Pb)
Krishna K. Pandey and Agustí Lledós
**Impact Factor:** 4.601

11. The Nature of M-B Versus M=B Bonds in Cationic Terminal Borylene Complexes: Structure and Energy Analysis in the Borylene Complexes [(η⁵-C₅H₅)(CO)₂M{B(η⁵-C₅Me₅)}]^+, [(η⁵-C₅H₅)(CO)₂M(BMes)]^+, and [(η⁵-C₅H₅)(CO)₂M(BNMe₂)]^+ (M = Fe, Ru, Os)
Krishna K. Pandey, Agusti Lledos and Feliu Maseras
**Impact Factor:** 3.963

12. Structure and Bonding Energy Analysis of Cobalt, Rhodium and Iridium Borylene Complexes [(η⁵-C₅H₅)(CO)M(BNX₂)] (X = Me, SiH₃, SiMe₃) and [(η⁵-C₅H₅)(CO)₂M(BN(SiH₃)₂)] (M = Co, Rh, Ir)
Krishna K. Pandey and Djamaladdin G. Musaev
**Impact Factor:** 3.963

13. Linear versus bent bonding in metal-phosphinidene complexes: Theoretical studies of the electrophilic phosphinidene complexes [(η⁵-C₅H₅)(CO)₂M(PMe)]^+, [(η⁵-C₅H₅)(CO)₂M(PMe)]^+ (M = Cr, Mo, W)
Krishna K. Pandey and Agustí Lledos
**Impact Factor:** 2.384

14. Computational Studies of Transition Metal Selectivity of Octapeptide Repeat Region of Prion Protein (PrP)
Krishna K. Pandey, James P. Snyder, Dennis C. Liotta and Djamaladdin G. Musaev
**Impact Factor:** 2.946
15. New ruthenium(II) thiolato complexes: Synthesis, reactivity, spectral, structural and DFT studies
Sudhakar D. Dwivedi, Santosh K. Dubey, Ashish K. Singh, Krishna K. Pandey and Daya S. Pandey
**Impact Factor: 1.846**

16. Structure and Bonding Energy Analysis of M-Ga Bonds in Dihalogallyl Complexes
Trans-[X(PMe$_3$)$_2$M(GaX$_2$)] (M = Ni, Pd, Pt; X = Cl, Br, I)
Krishna K. Pandey, Pankaj Patidar, Holger Braunschweig
**Impact Factor: 4.601**

17. Nature of M-Ga Bonds in Dihalogallyl Complexes ($\eta^5$-C$_5$H$_5$)(Me$_3$P)$_2$M(GaX$_2$) (M = Fe, Ru, Os) and ($\eta^5$-C$_5$H$_5$)(OC)$_2$M(GaX$_2$) (X = Cl, Br, I): A DFT Study
Krishna K. Pandey, Pankaj Patidar, Simon Aldridge
**Impact Factor: 2.946**

18. Nature of Bonding in Terminal Borylene, Alylene and Gallylene complexes of Vanadium and Niobium [(η$^5$-C$_5$H$_5$)(CO)$_2$M(ENR$_2$)] (M = V, Nb; E = B, Al, Ga; R = CH$_3$, SiH$_3$, CMe$_3$, SiMe$_3$): A DFT Study
Krishna K. Pandey, Holger Braunschweig, Agusti. Lledós
**Impact Factor: 4.601**

19. DFT Study on the Alkylborylene and Haloborylene Complexes of Manganese and Rhénium: Structure and Bonding Energy Analysis in [(η$^5$-C$_5$H$_5$)(CO)$_2$M(BR)] and [(η$^5$-C$_5$H$_5$)(CO)$_2$M(BX)] (M = Mn, Re; R = Me, Et, iPr, tBu; X = F, Cl, Br, I)
Krishna K. Pandey, Holger Braunschweig, Rian D. Dewhurst
**Impact Factor: 3.049**

20. Unexpected Generation of Diastereomers by Double Diboration of a Dialkyne
F. Bauer, H. Braunschweig, K. Gruß, Christoph Lambert, Krishna K. Pandey, K. Radacki, D. Reitzenstein
**Impact Factor: 5.925**

21. Nature of M-Ga Bonds in Cationic Metal-Gallylene Complexes of Iron, Ruthenium and Osmium [(η$^5$-C$_5$H$_5$)(L)$_2$M(GaX)]$^+$. A Theoretical Study
Krishna K. Pandey, Simon Aldridge
**Impact Factor: 4.601**
22. Nature of M-Bi bonds in dihalobismuth complexes of nickel, palladium and platinum trans-[X(PMe$_3$)M(BiX$_2$)] ($M = \text{Ni, Pd, Pt; } X = \text{Cl, Br, I}$)

Krishna K. Pandey

**Impact Factor: 1.288**

23. Nature of M-E bonds in metallosilylenes, germylenes, stannylenes and plumbylenes [(η$^5$-C$_5$H$_5$)(Me$_3$P)(H)$_2$M(EPh)] ($M = \text{Fe, Ru, Os; } E = \text{Si, Ge, Sn, Pb}$)

Krishna K. Pandey, Philip P. Power
Organometallics 30 (2011) 3353-3361

**Impact Factor: 3.963**

24. Structure and bonding energy analysis of cationic metal-ylne complexes of molybdenum and tungsten [(MeCN)(PMe$_3$)$_4$M=EMes]$^+$ ($M = \text{Mo, W; } E = \text{Si, Ge, Sn, Pb}$): A Theoretical Study

Krishna K. Pandey, Pankaj Patidar, Philip P. Power
Inorg. Chem. 50 (2011) 7080-7089

**Impact Factor: 4.601**

25. Structure and bonding analysis of dimethylgallyl complexes of iron, ruthenium and osmium [(η$^5$-C$_5$H$_5$)(CO)$_3$M(GaMe$_2$)] and [(η$^5$-C$_5$H$_5$)(Me$_3$P)$_2$M(GaMe$_2$)]

Krishna K. Pandey

**Impact Factor: 2.946**

26. Structure and bonding in haloarylallyl complexes of iron, ruthenium and osmium [(η$^5$-C$_5$H$_5$)(CO)$_2$M{Ga(X)(Ph)}]: A theoretical study

Krishna K. Pandey, Pankaj Patidar

**Impact Factor: 2.384**

27. Bis(borylene) Complexes of Cobalt, Rhodium, and Iridium [(η$^5$-C$_5$H$_5$)M(BNX$_2$)$_2$] ($X = \text{Me, SiH$_3$, SiMe$_3$}$): A Bonding Analysis

Krishna K. Pandey

**Impact Factor: 3.963**

28. Structure and bonding analysis of dihalogallyl and dimethylgallyl complexes of molybdenum and tungsten [(η$^5$-C$_5$H$_5$)(CO)$_3$M(GaX$_2$)] ($M = \text{Mo, W; } X = \text{Cl, Br, I, Me}$): A Theoretical Study

Krishna K. Pandey

**Impact Factor: 1.288**
29. The nature of M-Ga in metal(I) gallyl complexes of copper, silver and gold: A Theoretical study
Krishna K. Pandey
J. Organomet. Chem. 701 (2012) 75-79
**Impact Factor: 2.384**

30. Theoretical investigation of M=E bonds in transition metaleylidyne complexes trans-[H(PMe$_3$)$_4$M≡ER] (M = Mo, W; E = Si, Ge, Sn, Pb; R = Mes, Xylyl)
Krishna K. Pandey, Pankaj Patidar
**Impact Factor: 2.384**

31. Structure and bonding analysis in dihalobismuth complexes of iron, ruthenium and osmium [(η$_5$-C$_5$H$_5$)(CO)$_2$M(BiX$_2$)]: A theoretical Study
Krishna K. Pandey, Pankaj Patidar, Pradeep Tiwari
**Impact Factor: 2.057**

32. What is the best bonding model of the (σ-H-BR) species bound to a transition metal: Bonding analysis in complexes [(H)$_2$Cl(PMe$_3$)$_2$M(σ-H-BR)] (M = Fe, Ru, Os)
Krishna K. Pandey
**Impact Factor: 3.840**

33. Structure and bonding analysis of dimethylgallyl complexes of cobalt, rhodium and iridium [Me(PMe$_3$)$_2$(Me$_3$GaCl)M(GaMe$_2$)] (M = Co, Rh, Ir) and [Me(PMe$_3$)$_2$ClIr(GaMe$_2$)] : A theoretical study
Krishna K. Pandey
**Impact Factor: 2.384**

34. Theoretical investigation of triple bond in molybdenum complexes trans- [X(PMe$_3$)$_4$Mo≡E(Mes)] (X = F, Cl, Br, I; E = Si, Ge, Sn, Pb): A DFT study
Krishna K. Pandey, Pankaj Patidar
**Impact Factor: 2.057**

35. A theoretical study of the bonding and charge distribution in cationic group 8 metal borylene and alylene complexes: Consequences for complex stability and reactivity
Krishna K. Pandey
Polyhedron, 43 (2012) 131-139.
**Impact Factor: 2.057**
36. Bonding energy analysis in cationic borylene complexes of palladium and platinum: A theoretical study
Krishna. K. Pandey
Polyhedron 2012 Article in Press, DOI: 10.1016/j.poly.2012.04.005
Impact Factor: 2.057

37. The Nature of Mo≡E Bonds: Structure and Bonding Analysis of the Molybdenum-Ylidyne Complexes Trans-[X(dmpe)₂Mo≡E(η¹-C₅H₅)] (E = Si, Ge, Sn, Pb; X = H, Cl, Br, I, CN)
Krishna K. Pandey, Pankaj Patidar, Alexander C. Filippou
Inorg. Chem. 2012 Accepted.
Impact Factor: 4.601

**DR. R. PRASAD**

1. Synthesis of ethylene carbonate from cyclocondensation of ethylene glycol and urea over ZnO.Cr₂O₃ catalyst system controlled by co-precipitation method.
Sheenu Bhadauria, Samidha Sexana, Rajandra Prasad, Prabhakar Sharma, Reena Dwivedi.

2. Microwave assisted synthesis of tetragonal nanocrystalline zirconia Nanoparticles
Reena Dwivedi⁵, Anjali Maurya⁶, R Prasad⁴ and K S Bartwal.

3. Recent Progress in Non-linear Optical Material, Syntheses, Characterization and Geometry Optimization of Dicinnamalacetone

4. Effect of microwave on distribution of Zr⁴⁺ and Ti⁴⁺ during sol-gel synthesis of ZrTiO₄ nanoparticles.
Reena Dwivedi,Akrati Verma, R. Prasad, K.S. Bartwal
Optical Materials. Page 7
Impact Factor:2.02

5. Rigid thermosetting liquid moulding resin from sunflower oil
Navneet Hardia, P. L. Gupta, R.Dwivedi, Samidha Saxena, R. Prasad
Indian journal of Chemical technology, 18, 271-276, 2011.
Impact Factor: 0.267

6. Recent Progress in Non-linear Optical Material, Syntheses, Characterization and Geometry Optimization of Dicinnamalacetone
Sheenu Bhadauria, Samidha Sexana, Rajandra Prasad Reena Dwivedi.
Scholars Research Library 2011, 2 (2):36-44.
7. Kinetics studies and mechanism evolution of the epoxidation of styrene over nanoporous Au doped TS-1
Samidha Saxena, Reena Dwivedi, Sheenu Bhadauria, V. R. Chumbhale and R. Prasad
Details of Publications?
Impact Factor :0.441

8. Vapour Phase Catalytic Synthesis of 2-methylpyrazine over nanocrystalline Ferrite catalyst
Joyjit Basak, Navneet Hardia, Samidha Saxena, Rajeev Dixit, Reena Dwivedi, Sheenu Bhadauria and R.Prasad
Industrial & Engineering Chemistry Research, 2007. (Details of publicized paper)
Impact Factor:2.3

9. Ammoximation of Cyclohexanone over nanoporous TS-1 using UHP as an Oxidant
Impact Factor: 3.461

10. Structural and catalytic properties of Zn_{1-x}Cu_xFe_2O_4 nanoparticles
M. Banerjee, N. Verma, R. Prasad
Impact Factor:2.015

DR. ASHOK KUMAR

1. QSAR modeling of synthesized 3(1,3-benzothiazol-2-yl-2-phenyl quinazolin-4-(3H) ones as potent antibacterial agent
Ashok Kumar, Pratibha Sharma, Prerna Kumari, Jitendra Singh and M. P. Kaushik
(Impact factor 1.271)

2. Synthesis and exploration of QSAR model of 2-methyl-3-[2-(2-methylprop-1-en-1-yl)-1H-benzimidazol-1-yl]pyrimido[1,2-a]benzimidazol-4(3H)-one as potential antibacterial agents
Pratibha Sharma, Ashok Kumar, Manisha Sharma, Jitendra Singh, Prabal Bandyopadhyay, Manisha Sathe, & M. P. Kaushik
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3. Exploration of antimicrobial and antioxidant potential of newly synthesized 2,3-disubstituted quinazoline-4(3H)-ones
Ashok Kumar, Pratibha Sharma, Prerna Kumari and Bhagwan Lal Kalal
(Impact factor 2.554)
4. Methyl-2-(4-methylphenyl)-2H-azirine-3-carboxylate as Dienophile in Hetero Diels Alder Cycloaddition: A DFT approach
Pratibha Sharma, Ashok Kumar, and Vinita Sahu
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5. Theoretical Evaluation of Global and Local Electrophilicity Patterns to Characterize Hetero-Diels-Alder Cycloaddition of Three-Membered 2H-Azirine Ring System
Pratibha Sharma, Ashok Kumar, and Vinita Sahu
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6. A novel approach to the synthesis of 1,2,3-triazoles and their QSAR studies
Pratibha Sharma, Ashok Kumar, Siya Upadhyay, Jitendra Singh and Vinita Sahu
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7. Synthesis and Metal Extraction Behavior of Pyridine and 1,2,4-Triazole Substituted Calix[4]arenes
Ashok Kumar, Pratibha Sharma, Bhagwan Lal Kalal, and Lal Kumar Chandel
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8. Effect of molecular environment on the formation kinetics of complexes of malvidin-3-o-glucoside with caffeic acid and catechin.
Sa´ndor Kunsa´gi-Ma´te´, Ashok Kumar, Pratibha Sharma, La´szlo´ Kolla´r, and Martin Pour Nikfardjam
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9. Theoretical evaluation of the global and local electrophilicity patterns to characterize hetero Diels Alder cycloaddition in the synthesis of Isoxazolo-[4,5-e]-1,2,3,4-tetrazines
Pratibha Sharma, Ashok Kumar, Vinita Sahu and Jitendra Singh
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10. Synthesis and QSAR Modeling of 2-acetyl-2-ethoxycarbonyl-1-[4(4’-arylazo) -phenyl]-N,N-dimethyl-aminophenylaziridines as Potential Antibacterial Agents
Pratibha Sharma, Ashok Kumar, Siya Upadhyay, Vinita Sahu and Jitendra Singh
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11. Synthesis of bio-active Spiro-2-[3’-(2’-phenyl)-3H-indolyl]-1-aryl-3-phenyl aziridines and SAR studies on their antimicrobial behaviour
Pratibha Sharma, Ashok Kumar, Siya Upadhyay, Vinita Sahu, and Jitendra Singh
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13. Synergistic extraction and spectrophotometric determination of palladium (II) iron (III) and
tellurium (IV) at trace level by newly synthesized p-[4-(3, 5-dimethyl isoxazolyl)
azophenylazo] calix (4) arene
Ashok Kumar, Pratibha Sharma, Lal Kumar Chandel and Bhagwan Lal Kalal
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14. Synergistic solvent extraction of copper, cobalt, rhodium and iridium into 1, 2-Dichloroethane
at trace level by newly synthesized 25, 26, 27, 28-tetrahydroxy-5,11, 17, 23-tetra-[4-(N-
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15. Frontier Orbital Interactions in the NDAC and IEDDAC Hetero Diels Alder
Cycloaddition of Diazadienes
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16. Diels Alder reaction strategy to synthesize 1, 2, 4, 5- tetrazines and exploration of their anti-
inflammatory potential
Pratibha Sharma, Ashok Kumar, Vinita Sahu and Jitendra Singh
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DR. H.P.S. CHUAHAN

1. Synthesis and Spectroscopic [IR, SOID-STATE NMR (\(^1\)H, \(^{13}\)C & \(^{31}\)P)] Studies of 1,3-Dithia-2-
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FREUND PUBLICAT., Main Group Metal Chemistry, 30, 269-278 (2007)
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Bis(N, N’-dialkyldithiocarbamato)antimony(III) Alkylenedithiophosphates.
H. P. S. Chauhan and U. P. Singh
Impact Factor: 2.06
3. Synthesis and Spectroscopic Characterization as well as Antimicrobial Studies of 1,3-Dithia-2-Arsacyclopentane Derivatives of Phosphorus Based 1,1-Dithiolato Ligands.  
H. P. S. Chauhan, U. P. Singh, N. M. Shaik and S. Bhatiya  
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4. Synthesis and Characterization of Toluene-3,4-dithiolatoantimony(III) Derivatives with some Oxygen and/or Sulphur Donor Ligands  
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9. Synthesis, spectroscopic characterization as well as in vitro antibacterial activity of antimony(III) bis(dialkylidithiocarbamato)alkylidithiocarbonates  
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**DR. SHEELA JOSHI**

1. Synthesis and In-vitro Study of some medicinally important Mannich Bases derived from 2-amino-9\[\{(1,3 dihydroxy propane-2yl) oxy\} methyl\] 6-9 dihydro-3H-purin-6-one
Sheela Joshi, Purti Bilgayan and Anju Pathak

Anjudas Manikpuri, Sheela Joshi and P V. Khadikar
(Impact factor: 0.675)

3. Synthesis and antimicrobial study of the Mannich Bases of 4-\{(Dipropylamino)[Bis (Methylene)] Sulfanyl\} Benzamide
Sheela Joshi, Anjudas Manikpuri, and P.V.Khadikar

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Sheela Joshi, Anjudas Manikpuri, Deepak Khare and P.V.Khadikar.
   Sheela Joshi, Anjudas Manikpuri, Deepak Khare and P.V.Khadikar.
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   Sheela Joshi, Anudas Manikpuri, Prapti Tiwari.
   International J. of chemical sciences, vol. 7(2), (2009),869-877.
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    antimicrobial agent.
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    Sheela Joshi , Anju Das Manikpuri and Deepak Khare
    J. Indian Chemical Society, Kolkata 85, (2008), 1-5.
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    Mannich bases derived from 4-(dimethylamino)- 1,4,4a, 5,5a, 6,11,12a 
    octahydro -3,6,10,12,12a pentahydroxy naphthacene carboxamide.
    Sheela Joshi , Anju Das Manikpuri and Prapti Tiwari
    (Impact factor: 2.554)
1. A facile and rapid one-step synthesis of 8-substituted xanthine derivatives via tandem ring closure at room temperature
Prabal Bandyopadhyay, Sumit K. Agrawal, Manisha Sathe, Pratibha Sharma, M.P. Kaushik
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Ashok Kumar, Pratibha Sharma, Prerna Kumari, Jitendra Singh and M. P. Kaushik
(Impact factor 1.271)

3. Exploration of polystyrene-supported 2-isobutoxy-1-isobutoxycarbonyl-1,2-dihydroquinoline (PS-IIDQ) as new coupling agent for the synthesis of 8-substituted xanthine derivatives
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4. Oviposition and flight orientation response of Aedes aegypti to certain aromatic aryl hydrazono esters
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5. Synthesis and exploration of QSAR model of 2-methyl-3-[2-(2-methylprop-1-en-1-yl)-1H-benzimidazol-1-yl]pyrimido[1,2-a]benzimidazol-4(3H)-one as potential antibacterial agents
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6. Methyl 2-(4-methylphenyl)-2H-azirine-3-carboxylate as Dienophile in Hetero-Diels-Alder Cycloaddition: A DFT Approach
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Ashok Kumar, Pratibha Sharma, Prema Kumari and Bhagwan Lal Kalal
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8. Mesoporous Mixed Metal Oxide Nanocrystals: Efficient and Recyclable Heterogeneous Catalysts for the Synthesis of 1,2-Disubstituted Benzimidazoles and 2-Substituted Benzothiazoles
Prabal Bandyopadhyay, Manisha Sathe, G. K. Prasad, Pratibha Sharma and M.P. Kaushik
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9. Synthesis and bio-evaluation of aryl hydrazono esters for oviposition responses in Aedes albopictus
Prabal Bandyopadhyay, Lopamudra Guha, T. Seenivasagan, Manisha Sathe, Pratibha Sharma, B. D. Parashar, M. P. Kaushik
(Impact factor 2.554)

10. Exploration of in vitro time point quantitative evaluation of newly synthesized benzimidazole and benzothiazole derivatives as potential antibacterial agents
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15. Calix[n]arenes Mediated Phase Transfer Catalytic Synthesis of Purine Derivatives
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International Journal of Chemical Kinetics (Wiley Inter Science), 41, 265-274 (2009)
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16. Synthesis and characterization of transitional metals (Cu, Co, Fe) complexes of 6-Methyl-5-Arylhydrazone-2-Thio-4-Oxo-Pyrimidine
Aushutosh Mishra, Ruchita Awate, Namrata Soni, Niyati Mishra, Ritu Soni, and Pratibha Sharma
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Medicinal Chemistry Research (Springer), 18(5) 383-395 (2009)
(Impact factor 1.271)

20. Frontier orbital interactions in the NDAC and IEDDAC Hetero Diels Alder cycloaddition of diazadienes
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DR. SAVITA KHARE

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