

## C. V. / ACADEMIC PERFORMANCE INDICATOR

1. Name of the Applicant: **ASIT BARAN BISWAS**
2. Present Position: **Assistant Professor**
3. Date and Place of Birth: **08/01/1974**
4. Department: **CHEMICAL ENGINEERING**
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### A.

#### (i) Membership in Profession related committees:

| Category II a | Nature of Activity  |
|---------------|---|
| 1             | Life Member- Indian Institute of Chemical Engineers (IChE)- LM-25933.                           |
| 2             | Fellow- Indian Chemical Society- F / 7942 (LM)  |
| 3             | Life Member- Millennium Institute of Energy & Environment Management (MIEEM)-LM- 0164           |
| 4             | Calcutta University Chemical Engineering Alumni Association (CUChEAA)<br>University of Calcutta |

#### (ii) Extension and dissemination activities (public / popular lectures/ talks/ seminars etc.)

| Category II a | Nature of Activity                |
|---------------|-----------------------------------|
| 1             | Department Reunion Publication    |
| 2             | Participated in a different talks |

### B. Contribution to corporate life and management of the department and institution through participation in academic and administrative committees and responsibilities.

- (i). Administrative responsibility (including as Dean / Principal / Chairperson / Convener / Teacher-in-charge/similar other duties that require regular office hrs for its discharge)

| Category II- | Nature of Activity  |
|--------------|---|
| B.<br>(i)    | <b>Position held in Professional Institution / bodies:</b><br>1. <b>Hony. Joint Secretary</b> , Indian Institute of Chemical Engineers (IChE), Calcutta |

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|  | <p>Regional Centre, 2008-2009.</p> <ol style="list-style-type: none"> <li>2. <b>Course Co-ordinator</b> – Workshop on “Industrial Hazard and Risk Assessment- An Integrated Training Programme”, Organised jointly by Department of Chemical Engineering, University of Calcutta (CU) &amp; National Institute of Technology (NIT), Durgapur, at Department of Chemical Engineering, University of Calcutta on February 05-06, 2009.</li> <li>3. <b>Course Co-ordinator</b> – 2 Day Workshop on “Safety Management &amp; Loss Prevention in Chemical and allied Industry”, Organised by jointly Calcutta Regional Centre, IChE and Petroleum and Explosive Safety Organization (PESO), Ministry of Commerce and Industry, Govt. Of India, at IChE auditorium, Dr. H. L. Roy Building on December 04-05, 2009.</li> <li>4. <b>Honorary Treasurer</b>, Indian Institute of Chemical Engineers (IChE), Calcutta Regional Centre, 2009-2010.</li> <li>5. <b>Convener, Golden Jubilee Celebration Committee</b>, Calcutta Regional Centre Indian Institute of Chemical Engineers (IChE), November 02, 2009 June 27, 2010.</li> <li>6. <b>Honorary Treasurer</b>, Indian Institute of Chemical Engineers (IChE), Calcutta Regional Centre, 2010-2011.</li> <li>7. <b>Honorary Treasurer</b>, Indian Institute of Chemical Engineers (IChE), Calcutta Regional Centre, 2011-2012</li> <li>8. <b>Hony. Joint Secretary</b>, Indian Institute of Chemical Engineers (IChE), Calcutta Regional Centre, 2011-2012.</li> <li>9. <b>Members, Organizing Committee</b>, In Commemoration of 150<sup>th</sup> Birth Anniversary of Acharya Prafulla Chandra Ray, Memorial National Seminar on “<b>Chemical &amp; Pharmaceutical Industries in India- Present Scenario &amp; Future Prospects</b>” Organized jointly by Indian Institute of Chemical Engineers (IChE), Calcutta Regional Center &amp; Alumni Association, NCE Bengal &amp; Jadavpur University, In collaboration with University of Calcutta &amp; Jadavpur University, January 21<sup>st</sup> &amp; 22nd, 2011.</li> <li>10. <b>Convener, National Seminar Committee</b>, One day National seminar on <b>Waste Water Treatment Technologies</b> in commemoration of 122<sup>nd</sup> birth anniversary of Dr. H L Roy, organized by IChE, Calcutta Regional Centre at IChE auditorium, Jadavpur University Campus, Kolkata on 2<sup>nd</sup> November, 2011.</li> <li>11. <b>Honorary Treasurer</b>, Indian Institute of Chemical Engineers (IChE), Calcutta Regional Centre, 2011-2012.</li> <li>12. <b>Course Coordinator</b> – 2 Day Workshop on “<b>Process Safety Management</b>”, Organised by jointly Calcutta Regional Centre, IChE and Petroleum and Explosive Safety Organization (PESO), Ministry of Commerce and Industry, Govt. Of India, at IChE auditorium, Dr. H. L. Roy Building on September 28<sup>th</sup> &amp; 29<sup>th</sup>, 2012.</li> <li>13. <b>Hony. Joint Secretary</b>, Indian Institute of Chemical Engineers (IChE), Calcutta Regional Centre, 2012-2013.</li> <li>14. <b>Honorary Treasurer</b> Reunion 2012, Calcutta University Chemical Engineering Alumni Association in association with Department of Chemical Engineering, University of Calcutta.</li> <li>15. <b>Coordinator</b>, one-day Industry-Institute Interaction Programme on <b>Chemical and Process Design &amp; Engineering</b> in association with TEQIP – Phase III, and Calcutta University Chemical Engineering Alumni Association (CUCHEAA) University of</li> </ol> |
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|               | <p>Calcutta, held on <b>15<sup>th</sup> March, 2018</b> from 10 AM to 5 PM at Prof. N. K. Bose Memorial Hall, 1<sup>st</sup> Floor, Department of Chemical Engineering, University of Calcutta, 92 APC Road, Kolkata – 700009.</p> <p>16. <b>Coordinator</b>, Two-day Program on “<b>Chemical Engineering: What do I need to know? - Industry Perspective</b>” Organized by Chemical Engineering Department of University of Calcutta &amp; TEQIP – Phase III, Held on <b>26 &amp; 27<sup>th</sup> April, 2018</b> from 10.30 AM to 6.00 PM at Prof. N. K. Bose Memorial Hall, 1<sup>st</sup> Floor, Department of Chemical Engineering, University of Calcutta, 92 APC Road, Kolkata – 700009.</p> <p>17. <b>Coordinator</b>, 33 days program on “GATE training as provided by GATEFORUM” Organised by Chemical Engineering Department &amp; TEQUIP Phase III, University of Calcutta, from 26/09/2018 to 27/01/2019 at Prof. N. K. Bose Memorial Hall, Raja Bazar Science College Campus.</p> <p>18. <b>Executive Committee Members</b> of the Calcutta University Chemical Engineering Alumni Association (CUChEAA) University of Calcutta for the Years 2019 and 2020.</p> <p>19. <b>Expert for Poster Evaluation</b> at “International Conference on Emerging Technologies for Sustainable Development- ICETSD 19; 5<sup>th</sup> &amp; 6<sup>th</sup> March 2019; GCELT, Kolkata, India.</p> |
| <b>B.(ii)</b> | <p><b>Participation in Board of Studies, Academic and Administrative Committees</b></p> <p>Member Purchase Committee, TEQIP –II</p> <p>Member departmental Purchase Committee</p> <p>Member Board of Planning and Development</p> <p>Member Board of Examination -</p> <p>Paper Setter, Moderator &amp; Examiner - Paper setter</p> <p>Invigilation Duty</p> <p>Evaluation of answer script</p> <p>Continuous assessment - Class Test</p> <p>Examiner of Tripura JEE - Ans. Script Correction</p>  |

**C. Professional Development activities (such as participation in seminars, conferences, short term training courses, industrial experience, talks, lectures in refresher / faculty development courses, dissemination and general articles and any other contribution)**

**i. Participation in Short Term Training Course / Refreshers Course / Orientation Programme / Faculty Development Course**

| Sl. No. | Program  | Duration | Organized by   |
|---------|--|----------|--|
| 1.      | “ <b>Pedagogical Training in Engineering Education</b> ” | 2 weeks  | Engineering Staff College of India, A forum of the Institution of Engineers (India), Hyderabad, 09- 21 February 2009 |

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| 2.  | <b>Industry-Academia Workshop on “Refining &amp; Petrochemicals”</b>                             | 1 week  | Indian Oil-Corporation Ltd and Petroleum Federation of India (PETROFED) at Indian Oil Management Academy (IMA), Haldia, during 25-28 <sup>th</sup> May,2010  |
| 3   | <b>Summer School on “Petroleum Refining &amp; Petrochemicals”</b>                                | 1 week  | Indian Oil Institute of Petroleum Management (IiPM), Gurgaon, Organised jointly by Indian Oil-Corporation Ltd (IOCL), R&D Centre, IiPM and PETROTECH Society, New Delhi from 7 <sup>th</sup> to 11 <sup>th</sup> June 2010             |
| 4   | <b>Petrotech 7<sup>th</sup> Proficiency Course on “Modern Practice in Petroleum Exploration”</b> | 1 week  | Keshava Deva Malaviya Institute of Petroleum Exploration (KDMIPE) and ONGC Dehradun from 5 <sup>th</sup> to 9 <sup>th</sup> September 2011   |
| 5   | <b>Industry- Academia Workshop on “Simulation &amp; Modelling in the Process Industry”</b>       | 1 week  | PETROFED, LKMT in association with IOCL during 25 <sup>th</sup> -28 <sup>th</sup> July 2012 at IMA Haldia Refinery   |
| 6   | <b>Industry- Academia Workshop on Recent Trends in Petroleum Exploration Technology</b>          | 1 week  | ONGC Academy, ONGC in association with MBA Basin Kolkata during 10 <sup>th</sup> - 14 <sup>th</sup> February 2014 held at MBA Basin, ONGC, Kolkata.  |
| 7.  | <b>UGC –Sponsored 105<sup>th</sup> Orientation Program</b>                                       | 4 weeks | UGC Academic Staff College, University of Calcutta, July 15 to August 12, 2014.  |
| 8.  | <b>UGC –Sponsored 107th Orientation Program</b>  | 4weeks  | UGC –Sponsored Orientation Program at UGC Academic Staff College, University of Calcutta from August 25 to September 20, 2014.   |
| 9.  | <b>Petotech Summer school 2015 on “Petroleum Refining and Petrochemicals”</b>                    | 1 Week  | IndianOil R&D, IiPM and Petrotech at IiPM, Gurgaon from 1 <sup>st</sup> to 5 <sup>th</sup> June 2015   |
| 10. | <b>Faculty Development Programme on “Pedagogy, Accreditation, Research and entrepreneurship</b>  | 3 days  | Engineering Staff College of India (ESCI) & Centre for Skill Development & Engineering Consultancy (CSDEC), The Institution of Engineers (India), Engineers Bhawan, Shimla, HP 25 <sup>th</sup> – 27 <sup>th</sup> May 2016, TEQUIP-II |
| 11. | <b>UGC- Sponsored Special Winter School</b>  | 3 weeks | UGC – Human Resource Development Centre (HRDC), University of Calcutta 3 Weeks 2 <sup>nd</sup> Feb – 22 <sup>nd</sup> February, 2017   |

**ii. Participation in Seminars & Conferences:**

| Sl. No. | Program   | Duration                                   | Organized by  |
|---------|---|--|---|
| 1       | National Seminar on <b>“Leather Industry in Today’s Perspective</b>                             | 14 & 15 <sup>th</sup> November -2003       | CRC of IChE, College of Leather Technology, Indian leather technology association in collaboration with Central Leather Research Institute.                     |
| 2       | Workshop: <b>“Energy Conservation in Process Industries</b>                                     | September 10-11, 2004.                     | Organised by IChE- at Kolkata   |
| 3       | <b>Nanotechnology: An Awareness Programme (Nano Aware)</b>                                      | March 24-25, 2005                          | Organised by University College of Technology, Univ. of Calcutta  |
| 4       | seminar on <b>“Process Safety</b>   | 8-9, November -2005                        | IChE and Indian Chamber of Commerce   |
| 5       | National seminar on <b>“Drugs and Pharmaceuticals industry”</b>                                 | June 24, 2006                              | Calcutta Regional center, IChE  |
| 6       | National Convention on <b>“Seamless Engineering</b>   | August 16, 2006                            | Engineering Council of India  |
| 7       | International Seminar on <b>Science, Culture and Social Change (ISSCSC)</b>                     | January 18-20, 2007                        | Post-Centenary Golden Jubilee, The University of Calcutta   |
| 8       | National Seminar on <b>“Indian Scientific Heritage: Aryabhata to Harishchandra</b>              | 23 & 24 <sup>th</sup> February, 2007       | Ramkrishna Mission Vivekananda University, Belur Math, Howrah   |
| 9       | Workshop on <b>“Alternative to Carbon Tetrachloride- options and solutions</b>                  | 6 <sup>th</sup> November 2007              | Chemical Process Safety Group, Indian Institute of Chemical Engineers (IChE) and German Technical Cooperation (GTZ)   |
| 10      | Good Practice, <b>Advanced Teacher Training Programme</b>                                       | 8 <sup>th</sup> & 9 <sup>th</sup> May 2008 | National Education Research & Development Programme (NERDP) at Hyatt Regency  |
| 11      | National Seminar on <b>“Carbon Capture, Sequestration &amp; Trading (CCST),</b>                 | September 12- 13, 2008                     | Millennium Institute of Energy & Environment Management (MIEEM), at HSBC Hall, The Tollygunge Golf Club   |
| 12      | Workshop on <b>“Phasing out of CTC from Indian Industries- Clean Environmental Technology”,</b> | Organised by October 22, 2008              | Chemical, Environmental & Electrical Engineering Division, WBSC, The Institution of Engineers (India) in collaboration with German Technical Cooperation (GTZ), |
| 13      | seminar on <b>“Advances in Bio-Based technology</b>   | November 28, 2008                          | Organised by UCT-CU & BESU  |

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| 14 | <b>CHEMCON-2008</b>   | 27 <sup>th</sup> - 30 <sup>th</sup><br>December<br>2008 | Department of Chemical Engg. & Tech. Panjab University, Chandigarh  |
| 15 | National Conference on <b>“Nanotechnology and Regulatory Issues”</b> ,                              | January 9-10, 2009                                      | Calcutta University and The Energy and Resource Institute (teri)  |
| 16 | Workshop on <b>“Arsenic-Training on estimation and removal (Water-2009)</b>                         | January 16, 2009  | Department of Polymer Science and Technology, University of Calcutta  |
| 17 | Workshop on <b>“Industrial Hazard and Risk Assessment- An Integrated Training Programme</b>         | February 05-06, 2009                                    | Department of Chemical Engineering, University of Calcutta (CU) & National Institute of Technology (NIT), Durgapur  |
| 18 | Workshop on <b>“Hazardous Waste (Management, Handling and Transboundary Movement) Rules-2008”</b> , | April 17-18, 2009                                       | Indian Institute of Chemical Engineers (IChE), Calcutta Regional Center and Indian Chemical Council (ICC), Eastern region in collaboration with West Bengal Pollution Control Board                         |
| 19 | Workshop on <b>“ANSYS FLUENT- Introductory Lecture”</b>   | February 16-18, 2009                                    | Department of Chemical Engineering, University of Calcutta  |
| 20 | Workshop on <b>“Unite to Combat Climate Change</b>  | June 4, 2009  | Vivekananda Institute of Environment and Management, Kolkata and National Institute of Technical Teachers’ Training and Research (NITTTR), Kolkata  |
| 21 | Workshop on <b>“Safety management &amp; Loss Prevention in Chemical and Allied Industry”</b>        | December 4- 5, 2009                                     | Calcutta Regional Center, Indian Institute of Chemical Engineers (IChE) and Petroleum and Explosive Safety Organization (PESO), Ministry of Industries, Govt. of India,                                     |
| 22 | National Seminar on <b>“Green Energy and Environment”</b>   | January 16, 2010  | Department of Chemical Engineering Reunion Committee, University of Calcutta and Calcutta University Chemical Engineering Alumni Association, at Department of Chemical Engineering, University of Calcutta |
| 23 | Seminar on <b>“Green Energy and Energy Conservation”</b>  | February 26, 2010                                       | Petroleum Conservation Research Association (PCRA), ER, Department of Chemical Engineering & Calcutta University Chemical Engineering Alumni Association, University of Calcutta                            |
| 24 | Workshop on <b>Sustainable Green Technology towards Positive Action for Environment,</b>            | 4-5 June, 2010  | National Institute of Technical Teachers’ Training and Research, Kolkata and Vivekananda Institute of Environment and Management  |

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| 25 | <b>Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry Today (2010)</b><br>(In commemoration of the 150 <sup>th</sup> Birthday of Acharya Prafulla Chandra Ray) | August 02-04, 2010                                 | The Indian Chemical Society  |
| 26 | National Seminar on <b>“Chemical Technology &amp; Sustainable Development</b>  | 15-16 January 2011                                 | Department of Chemical Technology, University of Calcutta  |
| 27 | National Seminar on <b>“Chemical &amp; Pharmaceutical Industries in India- Present Scenario &amp; Future Prospects”</b>  | January 21 <sup>st</sup> & 22 <sup>nd</sup> , 2011 | Indian Institute of Chemical Engineers (IChE), Calcutta Regional Center & Alumni Association, NCE Bengal & Jadavpur University, In collaboration with University of Calcutta & Jadavpur University |
| 28 | National Seminar on <b>“Chemical Plants- Prospects and Challenges”</b>   | February 18, 2011                                  | Department of Chemical Engineering & Calcutta University Chemical Engineering Alumni Association, University of Calcutta   |
| 29 | Workshop on <b>Process Intensification</b>   | Friday 29 <sup>th</sup> July, 2011                 | IChE, Calcutta Regional Centre and Indian Chemical Council (ICC), Eastern Region   |
| 30 | National Seminar on <b>Chemistry in Human Welfare</b>  | 2 <sup>nd</sup> August, 2011                       | BCPL, IICB, IACS, IIT Kgp, JU, NCSM, NIPER, PU,RRRLF, BU,CU at Mini Auditorium, Science City   |
| 31 | National seminar on <b>Waste Water Treatment Technologies</b>  | 2 <sup>nd</sup> November , 2011                    | IChE, Calcutta Regional Centre at IChE auditorium  |
| 32 | Programme on <b>Quality Assurance in HEIs for faculty members</b>  | 3 <sup>rd</sup> November 2011                      | internal quality assurance cell (IQAC)   |
| 33 | <b>E-Waste Awareness Workshop- Responsibility of Bulk Consumers</b>  | 29 <sup>th</sup> August 2012                       | Toxics Link (for a toxics- free world) and Department of Chemical Engineering, University of Calcutta  |
| 34 | workshop on <b>Process Safety Management</b>   | 28 <sup>th</sup> & 29 <sup>th</sup> September 2012 | CRC, IChE & PESO, East Circle, Govt. of India  |
| 35 | National Conference on <b>CO<sub>2</sub> Capture &amp; Storage Technology</b>  | November 23, 2012                                  | Department of Chemical Engineering, University of Calcutta,  |
| 36 | National Seminar on <b>Role of Chemical Engineering in Sustainable</b>   | December 22, 2012                                  | Calcutta University Chemical Engineering Alumni Association & Department of Chemical Engineering, University of Calcutta   |

|    | <b>Development</b>   |  |  |
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| 37 | Workshop on <b>Society and Chemical Engineering</b>  | December 23, 2012                                  | Chemical Engineering Alumni Association & Department of Chemical Engineering, University of Calcutta                                       |
| 38 | Workshop on <b>Energy Management in Chemical, Petrochemical and Allied Industries,</b>               | 31 <sup>st</sup> May to 1 <sup>st</sup> June, 2013 | PCRA and Calcutta Regional Centre, IChE, at IChE auditorium, Dr H. L. Roy Building, Jadavpur University Campu                              |
| 39 | National seminar on <b>Green Technology in Chemical Industries</b>                                   | 14 <sup>th</sup> & 15 December , 2013              | department of Chemical Technology, University of Calcutta.   |
| 40 | <b>Author Workshop</b> at University of Calcutta   | 20 <sup>th</sup> November 2014                     | Springer and University of Calcutta  |
| 41 | National Conference on <b>Zero Liquid Discharge: Technology &amp; Environmental Policy</b>           | December 19, 2014                                  | Calcutta University Chemical Engineering Alumni Association in association with Department of Chemical Engineering, University of Calcutta |
| 42 | International Seminar on <b>Smart Materials and Chemical Industries</b>                              | 23-24 <sup>th</sup> December 2015                  | Organised by Department of Chemical Engineering, University of Calcutta  |
| 43 | Seminar on <b>Higher Education in India- Expansion with Excellence: The role of UGC-HRDCs,</b>       | 18 <sup>th</sup> march 2016                        | UGC-Human Resource Development Centre (HRDC), University of Calcutta   |
| 44 | <b>Entrepreneurship Development Programme (EDP-2016), Phase IA</b>                                   | 23 <sup>rd</sup> July 2016                         | Dept of Chemical Engg in association with Chem Engg Alumni association, TEQIP-II and CII- Eastern region innovation task force             |
| 45 | <b>Entrepreneurship Development Programme (EDP-2016), Phase IB</b>                                   | 10 <sup>th</sup> September 2016                    | Dept of Chemical Engg in association with Chem Engg Alumni association, TEQIP-II and CII- Eastern region innovation task force             |
| 46 | National Seminar on <b>Industrial Safety and Hazard Management in Chemical and Allied Industries</b> | 7-8 <sup>th</sup> January, 2017                    | Department of Chemical Technology, University of Calcutta  |
| 47 | National Seminar on <b>“Advancement of Polymer Engineering &amp; Industrial Challenges”</b>          | 27 <sup>th</sup> & 28 <sup>th</sup> January 2018   | Department of Polymer Science & Technology, University of Calcutta   |
| 48 | Seminar on <b>“ Basic Needs for Enhancing</b>  | 23 <sup>rd</sup> February                          | State Productivity Council- West Bengal & Technical association with Directorate of  |



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|           | <b>Productivity-Improvement of Health Safety &amp; Environment”</b>  | 2018   | Factories, Govt. of West Bengal   |
| <b>49</b> | Programme on “ <b>Workshop on MOOC with Moodle- e- content development and Open Educational Resources”</b> | 10 <sup>th</sup> & 11 <sup>th</sup> May 2018 | TEQIP- III and CRNN Salt Lake City, University of Calcutta  |
| <b>50</b> | National Seminar on “ <b>Challenges in Design, Operation and Maintenance of Process Industries”</b>        | December 21 & 22, 2018                       | Dept of Chemical Engg Alumni association in association with Dept. of Chem Engg, University of Calcutta |

### iii. Contribution in Reviewing Journal Article:

| <b>Sl. No.</b> | <b>Program</b>   |
|----------------|--|
| <b>1</b>       | 1. Journal of Environmental Chemical Engineering- Elsevier<br>2. Journal of CO <sub>2</sub> Utilization- Elsevier<br>3. Journal of CO <sub>2</sub> Utilization- Elsevier<br>4. Energy Conversion and Management - Elsevier<br>5. Chemosphere- Elsevier<br>6. 3 Biotech- Springer |

### (D) Research Paper Published in Journals:

| <b>Sl. No.</b> | <b>Title with Page No.</b>  | <b>Journal</b>                         | <b>ISSN/ IBBN</b>  | <b>Whether peer-reviewed. Impact factor, if any.</b> | <b>No. of co-authors</b> | <b>First and Principal / corresponding author / supervisor / mentor. Corresponding Author</b> |
|----------------|---|--|--|--|--------------------------|---|
| <b>1</b>       | Pyrolysis of Alternanthera philoxeroides (alligator weed): Effect of pyrolysis parameter on product yield and characterization of liquid product and bio char; 91 | <i>Journal of the Energy Institute</i> | <a href="http://dx.doi.org/10.1016/j.joei.2017.02.011">http://dx.doi.org/10.1016/j.joei.2017.02.011,</a> | <b>I. F. - 4.217</b> dated March 2019                | <b>2</b>                 | <b>Corresponding Author/ Supervisor</b>   |

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|   | (2018) 605-618  |  |   |                                       |   |   |
| 2 | Pyrolysis of orange bagasse: Comparative study and parametric influence on the product yield and their characterization; 7 (2019) 102903        | <i>Journal of Environmental Chemical Engineering</i>   | doi.org/10.1016/j.jece.2019.102903  | I. F.- 1.385 dated March 2019         | 2 | <b>Corresponding Author/ Supervisor</b> |
| 3 | Gas holdup in tapered bubble columns using non-Newtonian pseudoplastic liquid, 31(4), 574-581 (2014)  | <i>The Korean Journal of Chemical Engineering</i>      | DOI: 10.1007/s11814-013-0205-6, pISSN: 0256-1115,   | <b>I. F.- 2.199</b> dated March 2019  | 3 | <b>Supervisor</b>                       |
| 4 | Pressure drop in tapered bubble columns using non-Newtonian pseudoplastic liquid – experimental and ANN prediction, Volume 92:578–584, 2014     | <i>The Canadian Journal of Chemical Engineering</i>    | DOI 10.1002/cjce.21838  | <b>I.F. 1.265</b> dated March 2019    | 3 | <b>Supervisor</b>                       |
| 5 | Two-phase frictional pressure drops of gas-non-Newtonian liquid flow through helical coils in vertical orientation, 47(5), 816-826, 2008        | <i>Chemical Engineering &amp; Processing</i>           | DOI:10.1016/j.cep.2007.01.030   | <b>IF- 3.096</b> dated March 2019     | 2 | <b>Principal Author</b>                 |
| 6 | Frictional Pressure drop of air-non-Newtonian liquid flow through helical coils in horizontal orientation, 85(2), 129-136, 2007                 | <i>The Canadian Journal of Chemical Engineering</i>    | DOI:10.1002/cjce.5450850201   | <b>I. F. - 1.265</b> dated March 2019 | 2 | <b>Principal Author</b>                 |
| 7 | Holdup characteristics of gas-non-Newtonian liquid flow through helical coils in vertical, 45(21) (2006) & 45(23) (2006) 7287-7292 & 8748, 2006 | <i>Industrial &amp; Engineering Chemistry Research</i> | DOI: <a href="http://dx.doi.org/10.1021/ie060420i">http://dx.doi.org/10.1021/ie060420i</a> . ISSN:0888-5885,. | <b>I. F.- 3.141</b> dated March 2019  | 2 | <b>Principal Author</b>                 |

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| <b>8</b>  | Removal of Methylene Blue (aq) Using Untreated and Acid Treated Eucalyptus Leaves and GA-ANN Modelling;  | <i>The Canadian Journal of Chemical Engineering</i>                      | Accepted for Publication                             | <b>I. F. - 1.265</b> dated March 2019 | <b>4</b> | <b>Supervisor</b>                       |
| <b>9</b>  | Effect of taper angle on gas holdup in tapered bubble columns using non-Newtonian pseudoplastic liquids, 6(4), 116-120, (2014)   | Global Scientific Inc., <i>ChemXpress</i>                                | ISSN(Print) : 2320 .1967;ISSN(Online) : 2320 1975    | <b>IF- 0.13</b> dated March 2019      | <b>3</b> | <b>Supervisor</b>                       |
| <b>10</b> | ANN applicability in gas holdup prediction in tapered bubble columns using non-Newtonian pseudoplastic liquids, ChemXpress 8(2), 102-111, (2015)   | Global Chemical Engineering – An International Journal <i>ChemXpress</i> | ISSN: 2320-1967                                      | <b>IF- 0.13</b> dated March 2019      | <b>3</b> | <b>Supervisor</b>                       |
| <b>11</b> | Optimization of Physical Parameter for Bioethanol Production from Water Hyacinth (Eichhornia Craseeipes) By Ethanol and Temperature Resistant Strain of Saccharomyces Cerevisiae, Volume-26, Number - 03, 2016 | International journal of scientific progress and research (IJSPR)        | ISSN: 2349-4689.                                     | <b>IF- 3.963</b> dated July 2017      | <b>3</b> | <b>Corresponding Author/ Supervisor</b> |
| <b>12</b> | Fabrication of Environmental Friendly Perovskite Solar Cell by Partial Replacement of Lead with Tin,; Year : 2017, Volume : 7, Issue : 2; 59-63 , Print ISSN : 2231-3419. Online ISSN: 2454-7611,              | <i>Invertis Journal of Renewable Energy</i>                              | doi: 10.5958/2454-7611.2017.0008.X                   | [I. F. (SJIF - 6.2)]                  | <b>6</b> | <b>Jt. Supervisor</b>                   |
| <b>13</b> | Role of Trace Elements on the Production of Bioethanol from Water hyacinth Hydrolysed by Ethanol Resistant Strain of <i>Saccharomyces cerevisiae</i> AB810; 2018; 11(1):5-7                                    | <i>Asian Journal Research in Chemistry</i>                               | DOI: 10.5958/0974-4150.2018.0002.0<br>ISSN 0974-4169 |                                       | <b>3</b> | <b>Supervisor</b>                       |

|    |  |   |  |                                  |   |   |
|----|--|---|--|----------------------------------|---|---|
|    |  |   | (Print), )   |                                  |   |   |
| 14 | Comparative study of various pre-treatment techniques for saccharifications of water hyacinth (eichhornia crassipes) cellulose, volume 12 Issue 1– September - October 2015, 11-16 | <i>International Journal of Biotech Trends and Technology (IJBTT)</i>     | ISSN: 2249-0183  | <b>IF- 1.213</b> dated July 2017 | 3 | <b>Corresponding Author/ Supervisor</b> |
| 15 | “Graphene Co-Doped TiO <sub>2</sub> Nanocomposites for Photocatalysis and Photovoltaics Applications”; Vol 10(31), <b>August</b> 2017  | <i>Indian Journal of Science and Technology</i>                           | DOI: 10.17485/ijst/2017/v10i31/113878, ISSN (Print) : 0974-6846, |                                  | 7 | <b>Jt. Supervisor</b>                   |
| 16 | Fluoride Removal By Adsorption Using Activated Rice Husk, Issue 105, Volume 36, Number 03, 2017  | International journal of scientific progress and research (ijspr)         | ISSN: 2349-4689  | <b>IF- 3.963</b> dated July 2017 | 3 | <b>Corresponding Author/ Supervisor</b> |
| 17 | Studies on Development of High Yielding Ethanol and Temperature Resistance Strain of Saccharomyces cerevisiae, volume 13 Issue 1– November - December 2015, 20-24,                 | <i>International Journal of Biotech Trends and Technology (IJBTT)</i> ,   | ISSN: 2249-0183.   | <b>IF- 1.213</b> dated July 2017 | 3 | <b>Corresponding Author/ Supervisor</b> |
| 18 | Gas-non-Newtonian Liquid Flow through Horizontally Oriented Helical Coils- Prediction of Frictional Pressure drop Using ANN, Vol-3, Page No.-412-418, Issu: July 2011              | CiiT <b>International Journal of Artificial Intelligent Systems &amp;</b> | ISSN 0974-9667 & Online 0974-9543, DOI: AIML072011002            | <b>IF- 0.763</b> dated July 2017 | 4 | Other                                   |

|    |  |                                      |   |                   |   |       |
|----|--|--------------------------------------|---|-------------------|---|-------|
|    |  | <b>Machine Learning</b>              |   |                   |   |       |
| 19 | Holdup Analysis for Gas-non-Newtonian Liquid Flow through Horizontal Helical Coils-Empirical Correlation versus ANN Prediction, Volume CP1298, pp. 104-109, 2010 | <i>American Institute of Physics</i> | ISBN No.: 978-0-7354-0854-8, DOI: <a href="https://doi.org/10.1063/1.3516284">10.1063/1.3516284</a> | Peer Reviewed IF: | 4 | Other |

**(E) Publications Other than journal Articles (books, chapters in Books) :**

| Sl. No. | Title with Page No.   | Book Title, Editor, and Publisher  | ISSN/ IBBN  | First and Principal / corresponding author / supervisor / mentor. Corresponding Author |
|---------|---|--|---|--|
| 1       | Gas-Non-Newtonian liquid flow through helical coils-pressure drop and CFD analysis, Volume CP1298, pp. 98-103 (2010); | Proceedings On Modeling, Optimization, And Computing <i>American Institute of Physic</i> | ISBN No.: 978-0-7354-0854-8, DOI: <a href="https://doi.org/10.1063/1.3516433">10.1063/1.3516433</a> | Other  |

**(F) RESEARCH PROJECTS**

**(i) Sponsored Projects**

| Sl. No. | Title   | Agency          | Period             | Grant / Amount Mobilized (Rs. in lakhs) |
|---------|---|-----------------|--------------------|---|
| 1.      | Working as Co-coordinator in a project entitled: Modernisation of the Heat Transfer Laboratories (MODROB; 8024/RID/BOR/MOD/491/9/10 Date: 12/02/2010) | AICTE           | 2010-2012; 2 years | 1200000/                                |
| 2.      | Fluoride removal from drinking water by adsorption process using low cost adsorbents  | TEQIP-Phase II  | 2013-2014, 1 year  | 100000/                                 |
| 3       | Working as Coordinator for Improvement of Science and Technology Infrastructure (WBDST-FIST) in higher Educational Institutions                       | West Bengal DST | 2014-2015          | 492000/                                 |
| 4       | Working as Coordinator for Improvement of Science and Technology Infrastructure (WBDST-FIST) in higher Educational Institutions                       | WBDST-FIST      | 2016-2017          | 1241888/                                |
| 5       | Effect of nanoparticles on thermochemical and biochemical conversion of water hyacinth and  | UGC UPE-II      | 2017-              | 300000/                                 |

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| vegetable waste for the production of bio-fuels, bio-char and valuable chemicals. |  |  |  |
|---|--|--|--|

**F (ii) Consultancies Projects: NIL**

**F (iii) Projects Outcome / Outputs: NIL**

**G. RESEARCH GUIDANCE**

**G (i) M. Tech / M. Phil Project Supervised:**

| Sl. No.  | Number Enrolled | Thesis Submitted | Degree Awarded |
|----------|-----------------|------------------|----------------|
| M. Tech. | 02              | -                | 16             |

**M. Tech. Project Completed under my supervision and Guidance:**

1. "Hydrodynamics of Tapered Bubble Column", Pratik Gayen, Roll No.-97/CMM/090010, 2010.
2. "Removal of Phenol from industrial waste water using rice husk, fly ash and activated carbon", Dipanjalli Das, Roll No.-97/CMM/090012, 2010.
3. "Removal of Fluoride from aqueous solution by adsorption process using red mud and orange bagasse as an adsorbent", Baitali Ghosh, Roll No.-97/CMM/100004, 2011.
4. "Removal of Fluoride from aqueous solution by adsorption technique using activated carbon and orange bagasse", Sambaran Ghosh, Roll No.-97/CMM/111010, 2013.
5. "Hydrodynamics of tapered bubble column and prediction of gas holdup and pressure drop using artificial neural network for gas-Newtonian liquid", Koushik Ghosh, Roll No.- 97/ CMM/ 111013, 2013.
6. "Production of Bio-Ethanol from water hyacinth", Biswanath Biswas, Roll No.- 97/CMM/121003, 2014.
7. "Fluoride removal using modified Eucalyptus leaves", Ganesh Maity, Roll No.- 97/CMM/121012, 2014
8. "Fluoride Removal by adsorption Using Neem Leaves", Mohua Roy, Roll No.- 97/CMM/131002, 2015
9. "Bio-fuel Production from *AGERATINA ADENOPHORA* by Thermo-chemical process", Arunanshu Pal, Roll No: 97/CMM/141004, 2016

10. “Adsorptive removal of fluoride from aqueous solution using rice husk”, Riya Chatterjee, Roll No-97/CMM/141015, 2016

11. “Isolation of Essential Oil from Aromatic Plants by Hydro- Distillation”, Sakshi Gopal Majhi, Roll No- 97/CMM/151007, 2017

12. “Removal of fluoride from aqueous solution using rice husk”, Upasana baidya; Roll No.- 97/CMM/161018, 2018

13. “Production of bio-fuel from water hyacinth by pyrolysis”, Rakhi paul; Roll no- 97/CMM/161002, 2018

14. “Extraction of essential oil using hydro-distillation”, Hirak subhra samanta; Roll no.- 97/CMM/161017, 2018

15. “Adsorptive removal of crystal violet from aqueous solution using sulphuric acid treated Eucalyptus leaves”; Somnath Jana; Roll No.- 97/CMM/171016, 2019

16. “Pyrolysis of Biodegradable Kitchen Waste”; Puranjan Safui; Roll No.- 97/CMM/171009, 2019

### G (ii) Ph. D. Supervised/ Ongoing

| Sl. No. | Number Enrolled | Thesis Submitted      | Degree Awarded |
|---------|-----------------|-----------------------|----------------|
| Ph. D.  | 05              | 1- (within June 2019) | 1              |

### Ph. D. Completed & Undergoing under my supervision and Guidance:

| Name of candidate                | Title of the Work  | Registration No /Acceptance  | Place of Registration                                | Status   |
|----------------------------------|--|--|--|--|
| 1. Sri. Sumit Kumar Jana         | Some Studies on the Hydrodynamics Characteristics In Tapered Bubble Column using Non-Newtonian Liquids | Registration No: 2182 Ph. D. (Tech) proceed/11<br>Dated 31/05/2011 | Dept of Chemical Engineering, University of Calcutta | <b>Awarded, January 7, 2015</b><br>(Assistant Professor, BIT Meshra) |
| 2. Sri. Neelanjana Bhattacharjee | Studies on Bio-Fuels Production from Lignocellulosic Wastes by Thermochemical Process                  | Registration No: 2487 Ph. D (Tech) proceed/ 14 dated 10/04/2014    | Dept of Chemical Engineering, University of Calcutta | <b>Thesis will be submitted within april 2019.</b>                   |

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|----------------------------|--|--|--|--|
| 3. Sri. Bijoyaditya Mondal | Studies on Fluoride removal from aqueous solution using natural and modified adsorbents              | Registration No: 5819/Ph.D. (Tech.)<br>Proceed/2014, Date of Registration: 25/08/ 2014 | Dept of Chemical Engineering, University of Calcutta | Ongoing<br><b>(Rajiv Gandhi National Fellowship)</b> |
| 4. Sri Biswanath Biswas    | Bio-ethanol Production from Water Hyacinth by a Strain of Yeast Resistant to Temperature and Ethanol | Registration No: 4421/Ph.D. (Tech.)<br>Proceed/2016, Date of Registration: 22/06/ 2016 | Dept of Chemical Engineering                         | Ongoing<br><b>(Rajiv Gandhi National Fellowship)</b> |
| 5. Sri Sk Abdul Moyez      | Analysis of Perovskite based Thin Films for Solar Cells Application                                  | Registration No: 4824/Ph.D. (Tech.)<br>Proceed/2016, Date of Registration: 14/07/ 2016 | Dept of Chemical Engineering                         | Ongoing<br><b>(Rajiv Gandhi National Fellowship)</b> |
| 6. Sri Koushik Ghosh       | Some Studies on the Adsorption Removal of basic Dyes from Aqueous Solution                           | Registration No: 2410/Ph.D. (Tech.)<br>Proceed/2017, Date of Registration: 04/04/ 2017 | Dept of Chemical Engineering                         | Ongoing<br><b>(Rajiv Gandhi National Fellowship)</b> |

## H. Fellowship, Awards and Invited lecture delivered in conferences / Seminars

### H (i) Fellowships / Awards:

| Sl. No. | Details of Award/Honours /Recognitions   | Year      | Rendered by  | Whether International / National |
|---------|--|-----------|--|----------------------------------|
| 1.      | VICAL Award “The best students’ paper presentation during - CHEMCON            | 2004      | First Indo-US Conference and Chemical Engineering Congress-2004 , Mumbai | National                         |
| 2.      | Senior Research Fellow (SRF),; Fellowship No.- 9/28(574) EMRI-dated 27.08.2002 | 2002-2006 | Council of Scientific and Industrial Research (CSIR)                     | National                         |
| 3       | MHRD Fellowship, after qualifying GATE-98                                      | 1998      | MHRD- Govt. of India   | National                         |



## H (ii) Invited lectures / Papers

### Invited lectures:

| Sl. No. | Title of Lecture / Academic Session                  | Title of Conference / Seminar   | Organized by   | Whether International / National |
|---------|--|---|--|----------------------------------|
| 1.      | <b>Refinery Processes- using Hydrogen</b>            | Petroleum Refinery Engineering- Process   | The Calcutta Regional Centre, IChE on 14 <sup>th</sup> August 2013.  | National                         |
| 2       | <b>Indian Petroleum Scenario</b>                     | 106 <sup>th</sup> Orientation Program   | UGC- Academic Staff College, University of Calcutta , July 15- August 12, 2014   | National                         |
| 3       | <b>Overview of Petroleum Upstream &amp; Refining</b> | 106 <sup>th</sup> Orientation Program   | Academic Staff College, University of Calcutta, 2014   | National                         |
| 4.      | <b>Refinery Products and their Specifications</b>    | Recent Advancement in Upstream and Downstream Operation of Petroleum Industries | TEQIP- II & DST- Govt. of West Bengal sponsored, 4 <sup>th</sup> One week short term Program, at NIT Durgapur, June 13- 17, 2016 | National                         |
| 5.      | <b>Primary Energy Sourcess</b>                       | 125 <sup>th</sup> Orientation Program   | UGC- Human Resource Development Centre, University of Calcutta , February 26 <sup>th</sup> 2019                                  | National                         |

### Invited Papers:

| Sl. No. | Title of the Paper Presented  | Title of Conference / Seminar | Organized by                                     | Whether International / National / State / Regional / College or University Level |
|---------|---|-------------------------------|--|---|
| 1       | Gas-non-Newtonian liquid flow through concentric annulas              | CHEMCON- December 2003        | IChE, Chemical Engineering Congress, Bhubaneswar | National  |
| 2       | Gas-non-Newtonian liquids flow through helical coils, Paper No: TP 49 | CHEMCON- December 2004.       | IChE, Chemical Engineering Congress, Mumbai      | National  |
| 3.      | Two-phase gas-non-Newtonian liquid flow through vertical              | CHEMCON- 2005                 | IChE, Chemical Engineering                       | National  |

|    |   |  |   |               |
|----|---|--|---|---------------|
|    | helical coils   |  | Congress, New Delhi   |               |
| 4. | Hydrodynamics of Gas-Non-Newtonian Liquid Flow Through Helical Coils In Horizontal Orientation  | CHEMCON-2006   | IChE, Chemical Engineering Congress, Bharuch  | National      |
| 5. | Experiment and CFD Analysis of Gas-Non-Newtonian Liquid Flow Through Helical Coils  | CHEMCON-2008   | IChE, Chemical Engineering Congress, Panjab University                                  | National      |
| 6. | Hydrodynamics Study of Two-Phase Gas-Liquid Flow through Helical Coils, Page No.: 114-118   | International Conference on Advances in Mechanical and Building Science in the 3 <sup>rd</sup> Millennium; ICAMB – 2009. | VIT University, Vellore, Tamilnadu, December 14 <sup>th</sup> – 16 <sup>th</sup> , 2009 | International |
| 7. | Holdup analysis for gas-non-Newtonian liquid flow through horizontal helical coils-empirical correlation versus ANN prediction  | International Conference on “Modelling, Optimization and Computing” ICMOC 2010   | NIT Durgapur  | International |
| 8  | Effect of complex nutrients on bio-ethanol production from water hyacinth by ethanol and temperature resistant strain <i>Saccharomyces cerevisiae</i> AB <sub>810</sub> | International Conference on Emerging Technologies for Sustainable Development- ICETSD 2019                               | GCELT, Kolkata, India   | International |

**I declare that the information provided is correct to the best of my knowledge and documentary evidence for each information will be produced as and when required.**