

# Curriculum Vitae

Devendra Adhikari

## Personal Details

- **Name:** Devendra Adhikari
- **Date of Birth:** January 17, 1969
- **Affiliations:** Dept. of Physics, Mahendra Morang Adarsh Multiple Campus, Tribhuvan University, Biratnagar, Nepal.
- **Contact:**
  - **Email:** [devendra.adhikari@mmamc.tu.edu.np](mailto:devendra.adhikari@mmamc.tu.edu.np); [deven.bmhs@gmail.com](mailto:deven.bmhs@gmail.com)
  - **Cell:** 009779842028969 / 009779805377285
  - **Url:** [https://scholar.google.com/citations?user=\\_RrUzFEAAAAJ&hl=en](https://scholar.google.com/citations?user=_RrUzFEAAAAJ&hl=en)

## Professional Experience

- Asst. Lecturer: 1996-2000
- Lecturer: 2000-2009
- Reader: 2009-2013
- Professor: 2013-Present

## Education

- **Ph.D.:** T.M. Bhagalpur University, India, 2012  
Thesis title: Regular associated solution models for the properties of binary liquid alloys.  
Supervisor: Prof. B.P. Singh  
Date of Ph.D. Award: March 29, 2012
- **M. Sc.:** Tribhuvan University, Nepal, 1993
- **B. Sc.:** Tribhuvan University, Nepal, 1991
- **I. Sc.:** Tribhuvan University, Nepal, 1988

## Administrative and Other Activities

- **Head of Department-** Dept. of Physics, Mahendra Morang Adarsh Multiple Campus, Biratnagar (August, 2023-Present)
- **Chairperson-** Research Management Cell, Mahendra Morang A. M. Campus, Biratnagar (February, 2023- present)
- **Coordinator-** Strategic Planning Committee, MMAMC, Biratnagar (July 17, 2019-July 16, 2020)
- **Coordinator-** Department Research Committee, MMAMC, Biratnagar (August 4, 2019-Present)
- **Coordinator-** Self Assessment Team, MMAMC, Biratnagar (June 10, 2019-present)

- **Coordinator**- M.Sc. Physics, MMAMC, Birathagar (August 2, 2018-August 1, 2021)
- **Coordinator**- Science Research Committee, MMAMC, Biratnagar (June 28, 2018-present)
- **Coordinator**-EMIS Committee, MMAMC, Biratnagar (May 30, 2018-present)
- **Coordinator**- Library Management Committee, Western Region Campus, Tribhuvan University, Pokhara, December, 1997-December,1999
- **Member**-Selection Committee, B.P. Koirala Institute of Health Sciences, Dharan (August 14, 2015-August 13, 2018)
- **Member**- Standing Committee, Academic Council, Purwanchal University (2020-present)
- **Member**- Academic Council, Purwanchal University (2020-present)
- **Member**-Faculty Board, Tribhuvan University (April 17, 2019-April 16, 2021)
- **Member**- Campus Management Committee, MMAMC, Biratnagar (April 10, 2019-present)
- **Member**- Campus Executive Committee, MMAMC, Biratnagar (April 10, 2019-present)
- **Member**- Curriculum Development Committee, Open University Development Committee (August 19, 2015-August 18, 2017)
- **Member**- Subject Committee, Physics, Tribhuvan University (December 17, 2014-present)
- **Member Secretary**-IQAC, MMAMC, Biratnagar (July 4, 2019-present)
- **Member**- Science Working Committee, MMAMC, Birathagar (August 8, 2018-)
- **Member**-B.Sc. CSIT, BIT and M.Sc. Physics Working Committee, MMAMC, Biratnagar(December 17, 2014 -Present)
- **Member**- B.E. Coordination Committee, Western Region Campus, TU Pokhara (July, 1999-July, 2001)
- **Member**-Diploma Full-fee Management Committee, Western Region Campus, Tribhuvan University, Pokhara (August, 1998-August, 2001)
- **Member**- Advisory Board, Western Region Campus, Tribhuvan University, Pokhara (December, 1998-December, 1999)
- **Hostel Warden**- Western Region Campus, Tribhuvan University, Pokhara Committee, December, 1997-December,1999

## Professional Responsibilities

- Teaching in undergraduate and graduate levels
- Supervision for Masters Dissertation
- Research Supervision for Ph.D. students

## Research Supervision

- Ph.D.: 4 students (completed), 2 students (ongoing)
- M. Sc. Dissertation: 20 students (completed), 6 students (ongoing)
- B.Sc. project supervision: 40 students

## Research Projects

- Research Grants Project of NAST-2012
- Faculty Research Grants of UGC-2013
- Research Grant Project of NAST-2014
- Faculty Research Grant of UGC -2018

## Editorial Experience

- Editor-in-Chief: BIBECHANA, 2011-present
- Editor-in-Chief: The Journal of Knowledge and Innovation, 2022-present
- American Journal of Material Science and Engineering-Editorial Board Member

## Awards, Scholarships Nominations

- Best Teacher Award (2079) MMAMC, Biratnagar
- Nepal Vidya Bhusan "Ka"
- University Grant Commission fellowship for Ph.D.
- Max James Clerk Award, UK-2011 (Nominated for Best Author)
- Travel grant from INASP, UK
- Grant for visiting ICTP, Italy as Guest Scientist
- Travel grant from UGC for conference attendance in Germany
- Travel grant from UGC for conference attendance in India

## Other Affiliations

- Chairman - Nepal Physical Society, Koshi Province
- Life Member - Nepal Physical Society
- Indian Physics Congress Association - Member

## Publications

### (i) Peer-Review International Journals

1. Thermodynamic, surface and viscous properties of ternary Al–Fe–Mn alloy using theoretical modellings  
U Mehta, SK Yadav, I Koirala, D Adhikari  
*Physics and Chemistry of Liquids* 60 (1), 111-128, 2022
2. Temperature-dependent mixing behaviours of Bi–Mg liquid alloys  
IB Bhandari, I Koirala, D Adhikari  
*Physics and Chemistry of Liquids* 59 (6), 918-931, 2021
3. Thermodynamic, surface and transport properties of ternary Al–Sn–Zn liquid alloy and its sub binaries  
RK Gohivar, U Mehta, SK Yadav, RP Koirala, IS Jha, D Adhikari  
*Philosophical Magazine* 101 (11), 1380-1399, 2021
4. Study of excess free energy of mixing and heat of mixing of liquid ternary Al–Li–Zn alloy by assessing the thermodynamic properties of sub-binary alloys  
RK Gohivar, SK Yadav, RP Koirala, D Adhikari  
*Physica B: Condensed Matter* 610, 412941, 2021
5. Phase segregating and complex forming Pb-based (= X–Pb) liquid alloys  
IB Bhandari, N Panthi, I Koirala, D Adhikari  
*Phase Transitions* 94 (5), 338-352, 2021
6. Study of artifacts in thermodynamic and structural properties of Li–Mg alloy in liquid state using linear and exponential models  
RK Gohivar, SK Yadav, RP Koirala, D Adhikari  
*Heliyon* 7 (3), e06613, 2021

7. Optimization of thermodynamic and surface properties of ternary Ti–Al–Si alloy and its sub-binary alloys in molten state  
SK Yadav, U Mehta, D Adhikari  
*Heliyon* 7 (3), e06511, 2021
8. Thermodynamic and surface properties of Al–Li–Mg liquid alloy  
A Dhungana, SK Yadav, D Adhikari  
*Physica B: Physics of Condensed Matter* 598, 2020
9. Study of surface tension and viscosity of Cu–Fe–Si ternary alloy using a thermodynamic approach  
U Mehta, SK Yadav, I Koirala, RP Koirala, GK Shrestha, D Adhikari  
*Heliyon* 6 (8), e04674, 2021
10. Artifacts in Al–Mn liquid alloy  
RK Gohivar, SK Yadav, RP Koirala, D Adhikari  
*Physica B: Physics of Condensed Matter* 595 (2020), 412348
11. Mixing properties of Cu–Mg liquid alloy  
SK Yadav, M Gautam, D Adhikari  
*AIP Advances* 10 (12) (2020), 125320
12. Thermo-physical properties of ternary Al–Cu–Fe alloy in liquid state  
U Mehta, SK Yadav, I Koirala, D Adhikari  
*Philosophical Magazine* (2020)
13. Assessment of thermo-structural properties of Al-Fe and Fe-Si alloys at high temperatures  
RK Gohivar, SK Yadav, RP Koirala, D Adhikari  
*Physics and Chemistry of Liquids* (2020)
14. Thermodynamic and Surface Properties of Liquid Ti–Al–Fe Alloy at Different Temperatures  
U Mehta, SK Yadav, I Koirala, RP Koirala, D Adhikari  
*Physics and Chemistry of Liquids* (2020)
15. Prediction of thermodynamic and surface properties of ternary Ti–Si–Fe liquid alloy  
U Mehta, I Koirala, SK Yadav, RP Koirala, D Adhikari  
*Modelling and Simulation in Materials Science and Engineering*, (2020)
16. Temperature dependence of interaction parameters of Cu–Si liquid alloy  
RK Gohivar, RP Koirala, SK Yadav, D Adhikari  
*AIP Advances*, 2020
17. Thermodynamic, Microscopic and Surface Properties of Zn–In Liquid Alloy at 700 K  
HK Limbu, KK Mishra, J Nirala, IS Jha, BP Singh, D Adhikari  
*IOSR Journal of Applied Physics* 9 (1), 58-66, 2017
18. Optimization of Concentration Fluctuations in Zn-X (XIn and Cd) Binary Liquid Alloys at different Temperatures  
GK Shrestha, BK Singh, IS Jha, BP Singh, D Adhikari  
*International Journal of Scientific and Engineering Research* 7 (12), 895-903, 2016
19. Prediction of thermodynamic and surface properties of Pb–Hg liquid alloys at different temperatures  
SK Yadav, LN Jha, IS Jha, BP Singh, RP Koirala, D Adhikari  
*Philosophical Magazine* 96 (18), 1909-1925, 2016
20. Theoretical assessment on mixing properties of liquid Tl–Na alloys  
IS Jha, R Khadka, RP Koirala, BP Singh, D Adhikari  
*Philosophical Magazine* 96 (16), 1664-1683, 2016
21. Mixing behaviour of Ni–Al melt at 1873 K  
SK Yadav, S Lamichhane, LN Jha, NP Adhikari, D Adhikari  
*Physics and Chemistry of Liquids* 54 (3), 370-383, 2016
22. Thermodynamic and structural properties of Bi-based liquid alloys  
SK Yadav, LN Jha, D Adhikari  
*Physica B: Condensed Matter* 475, 40-47, 2015

23. Thermodynamic, structural and surface properties in Sn–Zn melt at 750 K  
BP Singh, RP Koirala, IS Jha, D Adhikari  
*Applied Physics A* 120 (4), 1347-1356, 2015
24. Segregating to ordering transformation in In–Sn melt  
SK Yadav, LN Jha, D Adhikari  
*Physics and Chemistry of Liquids* 53 (4), 443-454, 2015
25. Mixing behaviour of Au–Cu melt  
R Kattel, D Gadtoula, RP Koirala, IS Jha, BP Singh, D Adhikari  
*Journal of the Chinese Advanced Materials Society* 3 (3), 202-208, 2015
26. Thermo-physical properties of Mg–Tl melt  
D Adhikari, SK Yadav, LN Jha  
*Journal of Basic and Applied Research International* 9 (2), 103-110, 2015
27. Thermodynamic and Structural Behaviour of Mg–Ga Melt at 923 K  
SK Yadav, LN Jha, D Adhikari  
*Journal of Advanced Physics* 3 (3), 248-253, 2014
28. Concentration dependence of thermodynamic, transport and surface properties in Ag–Cu liquid alloys  
IS Jha, I Koirala, BP Singh, D Adhikari  
*Applied Physics A* 116 (3), 1517-1523, 2014
29. The segregating nature of Cd–Pb liquid binary alloys  
BP Singh, I Koirala, IS Jha, D Adhikari  
*Physics and Chemistry of Liquids* 52 (4), 457-470, 2014
30. Thermo-physical properties of Al–Fe melt  
D Adhikari, SK Yadav, LN Jha  
*Journal of the Chinese Advanced Materials Society* 2 (3), 149-158, 2014
31. Bulk and surface properties of Co–Fe and Fe–Pd liquid alloys  
RP Koirala, J Kumar, BP Singh, D Adhikari  
*Journal of Non-Crystalline Solids* 394, 9-15, 2014
32. Thermodynamic, Surface and Viscous Properties of Molten Ga–Zn Alloys  
RP Koirala, BP Singh, D Adhikari  
*Journal of Advanced Physics* 3 (2), 163-170, 2014
33. Mixing properties of liquid Bi–Pb alloys  
P Dahal, NK Rajbansi, D Adhikari  
*Journal of Molecular Liquids* 191, 151-155, 2014
34. Theoretical investigations of mixing properties in Ni–Pd liquid alloys  
I Koirala, BP Singh, IS Jha, D Adhikari  
*ChemXpress* 4 (1), 2014
35. Thermodynamic, transport and surface properties in In–Pb liquid alloys  
I Koirala, IS Jha, BP Singh, D Adhikari  
*Physica B: Condensed Matter* 423, 49-53, 2013
36. Thermodynamic, Structural and Transport Properties of Molten Copper-Thallium Alloys  
D Adhikari, RP Koirala, BP Singh  
*World Academy of Science, Engineering and Technology, International Journal ...*, 2013
37. Thermodynamic, structural and surface properties of liquid Cd–Zn alloys  
RP Koirala, BP Singh, IS Jha, D Adhikari  
*Journal of Molecular Liquids* 179, 60-66, 2013
38. Thermodynamic and structural behaviour of liquid Al–Ga alloys  
RP Koirala, BP Singh, IS Jha, D Adhikari  
*Adv Mat Lett* 4, 283, 2013
39. Short range order in molten Al–Si alloys  
BP Singh, D Adhikari, IS Jha  
*Physics and Chemistry of Liquids* 50 (6), 697-704, 2012

40. Alloying behaviour of molten Ni–Pt and Al–Ge alloys  
D Adhikari  
*Phase Transitions* 85 (9), 824-830, 2012
41. Mixing properties of Al–Mg liquid alloy  
D Adhikari, IS Jha, BP Singh  
*Indian Journal of Physics* 86 (9), 783-786, 2012
42. Phase separation in Na–K liquid alloy  
D Adhikari, BP Singh, IS Jha  
*Phase Transitions* 85 (8), 675-680, 2012
43. Energetics of Cd-based binary liquid alloys  
D Adhikari, BP Singh, IS Jha  
*Journal of Non-Crystalline Solids* 358 (11), 1362-1367, 2012
44. Structural and energetic anomaly in liquid Na–Sn alloys  
D Adhikari, BP Singh, IS Jha  
*Journal of Molecular Liquids* 167, 52-56, 2012
45. Mixing behaviour of sodium-based liquid alloys  
IS Jha, D Adhikari, BP Singh  
*Physics and Chemistry of Liquids* 50 (2), 199-209, 2012
46. Structural and energetic assessment in cadmium–indium liquid alloys  
BP Singh, RP Koirala, IS Jha, D Adhikari  
*Physics and Chemistry of Liquids*, 1-8, 2012
47. Transport and surface properties of molten Al–Mn alloy  
D Adhikari, IS Jha, BP Singh  
*Adv. Mat. Lett* 3 (3), 226-230, 2012
48. Anomaly in mixing properties of lithium–magnesium liquid alloy  
IS Jha, D Adhikari, J Kumar, BP Singh  
*Phase Transitions* 84 (11-12), 1075-1083, 2011
49. Concentration dependence of thermodynamic properties of NaPb liquid alloy  
BP Singh, J Kumar, IS Jha, D Adhikari  
*World Journal of Condensed Matter Physics* 2011, 2011
50. Alloying Behaviour of CuPd Liquid Alloy  
BP Singh, D Adhikari, IS Jha, J Kumar, RP Koirala  
*Materials Sciences and Applications* 2 (08), 1139, 2011
51. Chemical ordering and thermodynamic properties of HgNa liquid alloys  
D Adhikari, BP Singh, IS Jha, BK Singh  
*Journal of Non-Crystalline Solids* 357 (15), 2892-2896, 2011
52. Disorder in liquid Cu–Pd alloys  
D Adhikari  
*Phase Transitions* 84 (4), 308-314, 2011
53. Inhomogeneity in structure of MgPb liquid alloy  
D Adhikari  
*Physica B: Condensed Matter* 406 (3), 445-448, 2011
54. Thermodynamic and structural investigations of liquid magnesium–thallium alloys  
D Adhikari, IS Jha, BP Singh, J Kumar  
*Journal of Molecular Structure* 985 (1), 91-94, 2011
55. Structural and energetic asymmetry in liquid Ag–Al alloys  
D Adhikari, BP Singh, IS Jha  
*Physics and Chemistry of Liquids* 48 (6), 787-796, 2010
56. Thermodynamic properties and microscopic structure of liquid Cd–Na alloys by estimating complex concentration in a regular associated solution  
D Adhikari, BP Singh, IS Jha, BK Singh  
*Journal of Molecular Liquids* 156 (2), 115-119, 2010

57. Concentration dependence of the structure and thermodynamic properties of silver–antimony alloys  
BP Singh, D Adhikari, IS Jha  
*Journal of Non-Crystalline Solids* 356 (33), 1730-1734, 2010
58. Structural asymmetry in liquid Fe–Si alloys  
D Adhikari, IS Jha, BP Singh  
*Philosophical Magazine* 90 (20), 2687-2694, 2010
59. Thermodynamic and microscopic structure of liquid Cu–Sn alloys  
D Adhikari, IS Jha, BP Singh  
*Physica B: Condensed Matter* 405 (7), 1861-1865, 2010

## (ii) Peer-Review National Journals

1. Thermodynamic, structural, surface and transport properties of Zn-Cd liquid alloy at 800 K  
KK Mishra, HK Limbu, B Yadav, AK Khan, IS Jha, D Adhikari  
*BIBECHANA* 14, 54-65, 2016
2. Energetics and local order in In-based liquid alloys  
RP Koirala, BP Singh, IS Jha, D Adhikari  
*BIBECHANA* 13, 60-71, 2015
3. Thermodynamic, structural, transport and surface properties of Pb-Tl liquid alloy  
SK Yadav, LN Jha, D Adhikari  
*BIBECHANA* 12, 20-29, 2014
4. Viscosity of liquid Na-K alloy  
RP Koirala, BP Singh, IS Jha, D Adhikari  
*BIBECHANA* 12 (0), 135-144, 2014
5. Chemical ordering in In-Sn liquid alloy  
D Adhikari  
*Nepal Journal of Science and Technology* 14 (2), 161-164, 2014
6. Segregation in Fe-Pd melt at 1873 K  
SK Yadav, LN Jha, D Adhikari  
*BIBECHANA* 11, 86-93, 2014
7. Structural study of liquid Sn-Tl alloys  
RP Koirala, IS Jha, BP Singh, D Adhikari  
*BIBECHANA* 11, 46-52, 2014
8. Mixing properties of Ni-Pd liquid alloy  
L Gurung, RP Koirala, D Adhikari  
*BIBECHANA* 10, 108-114, 2013
9. Thermo-physical properties of molten Cd-Ga alloys  
RP Koirala, BP Singh, D Adhikari  
*BIBECHANA* 10, 9-19, 2013
10. Surface tension of two weakly interacting liquid alloys  
RP Koirala, D Adhikari, BP Singh  
*BIBECHANA* 9, 103-112, 2012
11. Thermodynamic and structural properties of Mg-Tl liquid alloy  
BP Singh, D Adhikari, IS Jha, BC Kumar, SK Chaudhary, SK Jayaswal  
*BIBECHANA* 8, 81-89, 2012
12. A Theoretical study of thermodynamic properties of Cd-Bi liquid alloy  
D Adhikari  
*BIBECHANA* 8, 90-95, 2012
13. Concentration Fluctuation in long Wavelength limit in liquid Magnesium Alloy  
D Adhikari, BP Singh, IS Jha  
*Himalayan Physics* 2 (2), 47-49, 2011

14. Complex formation in liquid potassium-lead alloy  
BP Singh, D Adhikari, IS Jha, BK Singh  
*BIBECHANA* 7, 1-5, 2011
15. Energy Disorder in Liquid Fe-Si Alloy  
D Adhikari, IS Jha, BP Singh  
*Himalayan Physics* 1, 37-40, 2010
16. Free Energy of Mixing and Activity of HgK Liquid Alloy  
BP Singh, IS Jha, D Adhikari  
*BIBECHANA* 6, 18-21, 2010
17. Regular Associated Solution Model for the Estimation of Free Energy of Mixing of Binary Liquid Alloys  
D Adhikari, BP Singh, IS Jha  
*Scientific World* 8 (8), 30-33, 2010
18. Dark Matter in the Universe  
D Adhikari, KR Adhikari  
*BIBECHANA* 6, 27-30, 2010
19. Experimental Study of Free Energy of Activation of Flow and Grunberg-Nissan Parameters in Binary Liquid Mixtures  
IS Jha, RP Koirala, D Adhikari  
*BIBECHANA* 6, 9-14, 2010

### (iii) Books

1. Physics for Engineering Students, M2M Publication, 2003
2. Mathematical Physics for B.Sc. 3rd year, B and B Publication, 2008
3. Fundamentals of Numerical Example in Physics, B and R Publication, 2010

### Conference/Workshop

1. World Academy of Science and Technology, 22nd-23rd May, 2013, Germany
2. International Conference on Emerging Trends on Science and Technology, March 22-23, 2014, Biratnagar, Nepal
3. Seminar on Modern Trends in Science and Technology, December 28-29, 2012, Biratnagar, Nepal
4. 1st International Science Congress, 24th-25th December, 2011, Indore, India
5. Regional Chemistry Seminar-2011, 7th-8th June, 2011, Biratnagar, Nepal
6. AuthorAID@INASP Training Workshop on Research Writing Skill, 14th-17th March, 2011, Kathmandu, Nepal
7. AuthorAID@INASP Train the Trainer Workshop, 18th March, 2011, Kathmandu, Nepal
8. International Conference on Frontiers of Physics, 2nd-5th June, 2009, Kathmandu, Nepal
9. Teaching Skill Improvement Training, 13th-23rd September, 1999, Kathmandu, Nepal

### Workshop/Seminar Organized

1. AuthorAID Workshop on Research Writing and Publishing, 29th-30th July, 2011, Biratnagar, Nepal (Chief Facilitator) - Program was supported by INASP, UK.
2. Seminar on Modern Trends in Science and Technology, December 28-29, 2012, Biratnagar, Nepal, Conference Secretary and Editor
3. International Conference on Emerging Trends on Science and Technology, March 22-23, 2014, Biratnagar, Nepal, Conference Convener and Editor