



## Dr Asok Adak

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Address: Howrah ,West Bengal,India - 711103

## Expertise

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### Civil Engineering

Environmental Engineering and Management; Water Treatment; Wastewater Treatment; Adsorption; Adsolubilization; Advanced oxidation process; Emerging contaminants

## Work experience

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1. Indian Institute of Engineering Science and Technology, Shibpur 2014 — Present

Associate Professor  
Howrah

2. Bengal Engineering and Science University 2007 — 2014

Assistant Professor  
Howrah

3. Jalpaiguri Govt Engg College 2006 — 2007

Assistant Professor  
Jalpaiguri

4. Birla Institute of Technology and Science, Pilani 2005 — 2006

Lecturer  
Jhunjhunu

## Education

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1. B.E - 2000
2. B.E - 2000
3. B.E - 2000

## Honours and Awards

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1. Shrimati SaromaSanyal Memorial Prize - 2013  
the Institute of Engineers (India)
2. Raman Fellowship - 2013  
University Grants Commission, New Delhi
3. IEI Young Engineers Award - 2009  
the Institute of Engineers (India)
4. Young Faculty Research Award - 2008  
Bengal Engineering College Alumni Association - Washington Metropolitan Area
5. Silver Medal at IIT - 2001  
IIT Kgaragpur

## Research Project

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Investigating the environmental transformation of organoarsenicals through photolytic mechanisms

Role: Project Investigator

Year 2013, Amount USD 36000 (Fellowshi

# Use of Surfactant Treated Sludge for the Removal of Persistent Organic Pollutants (POPs) from Water Environment

Role: Project Investigator

Year 2007, Amount 1224000

## Publication

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1. Fabrication of Montmorillonite Impregnated Cellulose Acetate Nanofiber Membrane and its Use for Adsorption of Ciprofloxacin

Das, Sushma and Adak, Asok and Barui, Ananya

Journal of Indian Chemical Society, Volume 96, Year 2019, Pages 1--5

2. Antimicrobials and antimicrobial resistance : Causes and remedies – A short Review

Barbhuiya, Najmul Haque and Das, Deepjyoti and Adak, Asok

Journal of Indian Chemical Society, Volume 96, Year 2019, Pages 1--6

3. Degradation of 2,4-dichlorophenoxyacetic acid by UV 253.7 and UV-H<sub>2</sub>O<sub>2</sub>: reaction kinetics and effects of interfering substances

Adak, Asok and Das, Indrasis and Mondal, Bijoli and Koner, Suman and Datta, Pallab and Blaney, Lee  
Emerging Contaminants, Volume 5, Year 2019, Pages 53--60

4. Degradation of anionic surfactant in municipal wastewater by UV-H<sub>2</sub>O<sub>2</sub>: process optimization using response surface

Mondal, Bijoli and Adak, Asok and Datta, Pallab

Journal of Photochemistry and Photobiology A: Chemistry, Volume 375, Year 2019, Pages 237--243

5. Degradation of anionic surfactant in municipal wastewater by UV-H<sub>2</sub>O<sub>2</sub> : Process optimization using response surface methodology

Mondal, Bijoli; Adak, Asok; Datta, Pallab

Journal of Photochemistry and Photobiology A: Chemistry, Volume 375, Year 2019, Pages 237-243

6. Degradation of 2,4-dichlorophenoxyacetic acid by UV 253.7 and UV-H<sub>2</sub>O<sub>2</sub> : Reaction kinetics and effects of interfering substances

Adak, Asok; Das, Indrasis; Mondal, Bijoli; Koner, Suman; Datta, Pallab; Blaney, Lee

Emerging Contaminants, Volume 5, Year 2019, Pages 53-60

7. Determination of extent of antibiotic resistance bacteria in wastewater and removal of antibiotics using UV-H<sub>2</sub>O<sub>2</sub> process

Hait, K. and Adak, A. and Mondal, B. and Datta, P.

Journal of Indian Chemical Society, Volume 95, Year 2018, Pages 325--330

UV-H<sub>2</sub>O<sub>2</sub> advanced oxidation of anionic surfactant: reaction kinetics ,

8. **effects of interfering substance and operating conditions**

Mondal, Bijoli and Adak, Asok and Datta, Pallab  
Environmental Engineering and Management Journal, Year 2018

9. **Complete degradation of the anionic surfactant by UV based advanced oxidation process and biodegradability**

Mondal, B. and Hait, K. and Adak, A. and Datta, P.  
Journal of Indian Chemical Society, Volume 95, Year 2018, Pages 331--336

10. **Removal of antibiotics from water and wastewater by nonofibre membrane**

Das, S. and Adak, A. and Barui, A.  
International Conference on Energy and Environment: Global Challenges (ICEE 2018), Year 2018

11. **Effect of operating conditions and interfering substances on photochemical degradation of a cationic surfactant**

Mondal, Bijoli; Adak, Asok; Datta, Pallab  
Environmental Technology (United Kingdom), Volume 39, Year 2018, Pages 2771-2780

12. **Sorptive removal of Pb(II) ions from aqueous solution using sweetmeat waste: Batch and column study**

Islam, M. M.; Adak, A.; Paul, P. K.  
Separation Science and Technology (Philadelphia), Volume 53, Year 2018, Pages 219-229

13. **Adsolubilization of organic dye through surfactant modified silica gel waste from aquatic environment: batch and fixed bed studies**

Koner, S. and Adak, A.  
International Journal of Environmental Engineering, Volume 4, Year 2017, Pages 1--5

14. **Characterization of sweetmeat waste and its suitability for sorption of As(III) in aqueous media**

Islam, Md Mirajul; Adak, Asok; Paul, Prabir K.  
Water Environment Research, Volume 89, Year 2017, Pages 312-322

15. **Nanomaterials-based advanced oxidation processes for wastewater treatment: A review**

Bethi, Bhaskar; Sonawane, Shirish H.; Bhanvase, Bharat A.; Gumfekar, Sarang P.  
Chemical Engineering and Processing: Process Intensification, Volume 109, Year 2016, Pages 178-189

16. **Surfactant removal by metal oxides and adsolubilization of organics in exhausted materials**

Koner, S. and Adak, A. and Pal, A.  
8th International Conference on Environmental Science and Technology, Huston, USA, Year 2016

## Degradation of 2,4-dichlorophenoxy acetic acid by advance oxidation

17. **process**  
Das, I. and Mondal, B. and Koner, S. and Adak, A.  
Recycle - 2016, Year 2016
18. **Complete degradation of the cationic surfactant by UV based advanced oxidation process**  
Mondal, B. and Das, I. and Datta, P. and Adak, A.  
Recycle - 2016, Year 2016
19. **Electrokinetic remediation of chromium contaminated soil**  
Chakraborty, Rupa and Adak, Asok and Ghosh, Ambarish  
50th Indian Geotechnical Conference, Year 2015, Pages 1--9
20. **Organoarsenicals in poultry litter: Detection, fate, and toxicity**  
Mangalgiri, Kiranmayi P.; Adak, Asok; Blaney, Lee  
Environment International, Volume 75, Year 2015, Pages 68-80
21. **Adsorbubilization of methylene blue dye using surfactant modified silica gel waste**  
Adak, A. and Koner, S.  
47th Annual Convention of Indian Water Works Association, Kolkata, India, Year 2015
22. **UV irradiation and UV-H<sub>2</sub>O<sub>2</sub> advanced oxidation of the roxarsone and nitarsone organoarsenicals**  
Adak, Asok; Mangalgiri, ; Lee, Jessica; Blaney, Lee  
Water Research, Volume 70, Year 2015, Pages 74-85
23. **Application of silica gel factory waste for methyl orange dye removal**  
Koner, Suman; Pal, Anjali; Adak, Asok  
International Journal of Environment and Waste Management, Volume 13, Year 2014, Pages 37-49
24. **Photochemical UV-H<sub>2</sub>O<sub>2</sub> system for oxidation of organoarsenicals in agricultural wastewater**  
Mangalgiri, K. and Adak, A. and He, K. and Blaney, L.  
248th American Chemical Society Annual Meeting (San Francisco, CA), Year 2014
25. **Treatment of agricultural wastewater containing organoarsenicals using UV-based processes**  
Blaney, L. and Mangalgiri, K. and Adak, A.  
2014 Tri-Association Conference (Ocean City, MD), Year 2014
26. **Methyl orange dye removal using surfactant modified silica gel waste - a fixed bed column study**  
Adak, A. and Koner, S.  
International Conference on Recent Trends and Challenges in Civil Engineering, MNNIT Allahabad, Year

27. **Adsorption of 2,4-D herbicide from water environment on modified silica gel factory waste**

Koner, Suman and Pal, Anjali and Adak, Asok  
Water Environment Research, Volume 85, Year 2013, Pages 2147--2156

28. **Adsorption of 2, 4-D herbicide from water environment on modified silica gel factory waste**

Koner, Suman;Pal, Anjali;Adak, Asok  
Water Environment Research, Volume 85, Year 2013, Pages 2147-2156

29. **Fixed Bed Column Study for Adsorption of 2,4-D Herbicide on Surfactant Modified Silica Gel Waste**

Koner, S.;Adak, A.  
Journal of The Institution of Engineers (India): Series A, Volume 93, Year 2012, Pages 187-191

30. **Use of surface modified silica gel factory waste for removal of 2,4-D pesticide from agricultural wastewater: a case study**

Koner, S.;Pal, A.;Adak, A.  
International Journal of Environmental Research, Volume 6, Year 2012, Pages 995--1006

31. **Adsorption of cationic surfactant and subsequent adsorption of organics on silica gel waste**

Adak, A. and Koner, S.  
Conference on Technological Advancements in Chemical and Environmental Engineering, BITS, Pilani, Rajasthan, India, Year 2012

32. **Use of surface modified silica gel factory waste for removal of 2,4-D pesticide from agricultural wastewater: A case study**

Koner, S.;Pal, A.;Adak, A.  
International Journal of Environmental Research, Volume 6, Year 2012, Pages 995-1006

33. **Simulation of a process design model for anaerobic digestion of municipal solid wastes**

Adak A.  
World Academy of Science, Engineering and Technology, Volume 80, Year 2011, Pages 757-762

34. **Utilization of silica gel waste for adsorption of cationic surfactant and adsorption of organics from textile wastewater: A case study**

Koner, Suman;Pal, Anjali;Adak, Asok  
Desalination, Volume 276, Year 2011, Pages 142-147

35. **Adsorption kinetics and mechanism of methyl orange dye on modified silica gel waste**

Koner, Suman and Saha, Biswajit Kumar and Kumar, Rahul and Adak, Asok  
International Journal of Current Research, Volume 3, Year 2011, Pages 128--133



36. **Cationic surfactant adsorption on silica gel and its application for wastewater treatment**  
Koner, Suman;Pal, Anjali;Adak, Asok  
Desalination and Water Treatment, Volume 22, Year 2010, Pages 1-8
37. **Removal kinetics and mechanism for phenol uptake by surfactant-modified alumina**  
Adak, Asok;Pal, Anjali  
Desalination and Water Treatment, Volume 6, Year 2009, Pages 269-275
38. **Adsorption thermodynamics of arsenic on laterite soil**  
Maji, Sanjoy Kumar;Pal, Anjali;Pal, Tarasankar;Adak, Asok  
Journal of Surface Science and Technology, Volume 23, Year 2007, Pages 161-176
39. **Modeling and fixed bed column adsorption of As(III) on laterite soil**  
Maji, Sanjoy Kumar;Pal, Anjali;Pal, Tarasankar;Adak, Asok  
Separation and Purification Technology, Volume 56, Year 2007, Pages 284-290
40. **Modeling and fixed bed column adsorption of As(V) on laterite soil**  
Maji, Sanjoy K.;Pal, Anjali;Pal, Tarasankar;Adak, Asok  
Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, Volume 42, Year 2007, Pages 1585-1593
41. **Sorption kinetics of arsenic on laterite soil in aqueous medium**  
Maji, Sanjoy K.;Pal, Anjali;Pal, Tarasankar;Adak, Asok  
Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, Volume 42, Year 2007, Pages 989-996
42. **Removal kinetics and mechanism for crystal violet uptake by surfactant-modified alumina**  
Adak, Asok;Pal, Anjali  
Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, Volume 41, Year 2006, Pages 2283-2297
43. **Removal of phenol from aquatic environment by SDS-modified alumina: Batch and fixed bed studies**  
Adak, Asok;Pal, Anjali  
Separation and Purification Technology, Volume 50, Year 2006, Pages 256-262
44. **Removal of phenol from water environment by surfactant-modified alumina through adsolubilization**  
Adak, Asok;Pal, Anjali;Bandyopadhyay, Manas  
Colloids and Surfaces A: Physicochemical and Engineering Aspects, Volume 277, Year 2006, Pages 63-68
45. **Fixed bed column study for the removal of crystal violet (C. I. Basic**

### Violet 3) dye from aquatic environment by surfactant-modified alumina

Adak, Asok;Bandyopadyay, Manas;Pal, Anjali  
Dyes and Pigments, Volume 69, Year 2006, Pages 245-251

#### 46. Adsolubilization of organic compounds in surfactant-modified alumina

Adak, Asok;Bandyopadhyay, Manas;Pal, Anjali  
Journal of Surface Science and Technology, Volume 21, Year 2005, Pages 97-112

#### 47. Removal of anionic surfactant from wastewater by alumina: A case study

Adak, Asok;Bandyopadhyay, Manas;Pal, Anjali  
Colloids and Surfaces A: Physicochemical and Engineering Aspects, Volume 254, Year 2005, Pages 165-171

#### 48. Adsorption of anionic surfactant on alumina and reuse of the surfactant-modified alumina for the removal of crystal violet from aquatic environment

Adak, Asok;Bandyopadhyay, Manas;Pal, Anjali  
Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, Volume 40, Year 2005, Pages 167-182

#### 49. Spectrophotometric determination of anionic surfactants in wastewater using acridine orange

Adak, Asok;Pal, Anjali;Bandyopadhyay, Manas  
Indian Journal of Chemical Technology, Volume 12, Year 2005, Pages 145-148

#### 50. Removal of crystal violet dye from wastewater by surfactant-modified alumina

Adak, Asok;Bandyopadhyay, Manas;Pal, Anjali  
Separation and Purification Technology, Volume 44, Year 2005, Pages 139-144

#### 51. Problem of arsenic in groundwater - a feasible solution

Adak, Asok and Bandyopadhyay, Manas and Dikshit, Anil Kumar  
Interdisciplinary Environmental Review2, Volume 5, Year 2003, Pages 230--242

#### 52. Laboratory study on electrokinetic extraction of heavy metals from contaminated soil

Adak, A. and Bandyopadhyay, M.  
Indo-Italian Workshop on Emerging and Technology for Industrial Wastewater and Environment, NEERI, Nagpur, India, Year 2002

#### 53. Removal of anionic surfactants from the aquatic environment by adsorption using waste activated carbon

Gupta, S. and Bandyopadhyay, M. and Pal, A. and Adak, A.  
National Seminar and Workshop on Advanced Separation Processes, IIT, Kharagpur, India, Year 2002

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