



International e-Conference on
Nanomaterials & Nanoengineering
APA NANOFORUM-2022



February 24-26, 2022

Day-1 | 24th February, 2022 | Programme

Inauguration

Master of Ceremony: Chetna Verma, IIT Delhi

09:00-09:05	Welcome Address	S. P. Singh (Organizing Chair)
09:05-09:10	APA Address	Bhuvanesh Gupta (President, APA)
09:10-09:25	Conference Address	Venugopal Achanta (Director, CSIR- NPL, New Delhi, India)
09:25-09:45	Inaugural Address by Chief Guest	Shekhar C. Mande (DG, CSIR)
09:45-10:20	Inaugural Plenary by Guest of Honor	Paul S Weiss (University of California, USA)
10:20-10:25	Vote of Thanks	S.S. Kushvaha (Conference Secretary)

Session 1

Coordinator: Chetna Verma, IIT Delhi

Chairs: G. G. Scherer, PSI, Switzerland & Seeram Ramakrishna, NUS, Singapore

10:50-11:25	Plenary Talk	Katsuhiko Ariga
11:30-12:05	Plenary Talk	Chennupati Jagadish
12:10-12:45	Plenary Talk	Ashish Lele

12:45-13:30 | Lunch Break

Session 2

Nanomaterials & Nanofabrication

Coordinator: Ankita Sharma, IIT Delhi

Chairs: Seema Vinayak, SSPL, New Delhi, India & A.K. Srivastava, CSIR- AMPRI, Bhopal, India

13:30-13:55	KN	Ashok Ganguli (272)
13:55-14:20	KN	Xue Sen Wang (259)
14:20-14:35	IL	Somnath C. Roy (177)
14:35-14:50	IL	Bipin Gupta (246)
14:50-15:00	OL	Rashmi Rani (167)
15:00-15:10	OL	Saleem Khan (100)
15:10-15:20	OL	Sakshi Bagwari (175)
15:20-15:30	OL	Anant D. Kulkarni

Session 3

Nano Drug Delivery

Coordinator: Pratibha Singh, IIT Delhi

Chairs: Manohar Badiger, NCL Pune, India, & Biman Mandal, IIT, Guwahati, India

13:30-13:55	KN	WJ Kim (170)
13:55-14:20	KN	Laura Teodori (83)
14:20-14:35	IL	Poonam Negi (265)
14:35-14:50	IL	Garima Agrawal (79)
14:50-15:00	OL	Indu Rani (18)
15:00-15:10	OL	Bamadeb Patra (126)
15:10-15:20	OL	Subham Banerjee (244)

Session 4

Nano Energy Materials

Coordinator: Manali Somani, IIT Delhi

Chairs: Rajiv Prakash, IIT BHU, Varanasi, India & OP Sinha Amity, Noida, India

13:30-13:55	KN	SM Shivaprasad (254)
13:55-14:20	KN	Dinesh Kabra
14:20-14:35	IL	Rajesh Sharma (270)
14:35-14:50	IL	SS Kushvaha (223)
14:50-15:00	OL	Sahiba Bano (38)
15:00-15:10	OL	D Sengupta (24)
15:10-15:20	OL	Rosalin Rath (63)
15:20-15:30	OL	Nidhi Puri (237)



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Session 5

Nanobiotechnology

Coordinator: Ankita Sharma, IIT Delhi

Chairs: Jaya kumar, Amrita Univ, Kochi, India &
BS Kaith, NIT Jalandhar, India

15:35-16:00	KN	Biman Mandal
16:00-16:15	IL	Kazutoshi Iijima (182)
16:15-16:30	IL	Ajay Karakoti (91)
16:30-16:40	OL	Rizwana Rehsawla (72)
16:40-16:50	OL	Nidhi Gupta (150)
16:50-17:00	OL	Pragyan A. Dash (93)

Session 8

Poster Presentations

Coordinator: Chetna Verma, IIT Delhi

Chairs: NC Kothiyal, NITJ, Jalandhar, India &
Dhiraj Sud, SLIET, India

17:00-17:05	C-1	Shabnam Thakur (27)
17:05-17:10	C-2	Ankita Sharma (13)
17:10-17:15	C-3	Shivani Bhardwaj (58)
17:15-17:20	C-4	Nikhil Shandilya (60)
17:20-17:25	C-5	Abdul Ahad Mokhtar (42)
17:25-17:30	C-6	Priyanka Vishwas (62)
17:30-17:35	C-7	Pratibha Singh (11)
17:35-17:40	C-8	Flavius P Nonglang (65)
17:40-17:45	C-9	Prakrati Garg (127)
17:45-17:50	C-10	Aaliya Ali (128)
17:50-17:55	C-11	Sriram Duraisampath (139)
17:55-18:00	C-12	Megha Gupta (142)
18:00-18:05	C-13	Suparna Mercy Basu (206)
18:05-18:10	C-14	Prasanthi Chittineedi (269)

Session 6

Hydrogen Energy & Devices

Coordinator: Vipula, IIT Delhi

Chairs: SM Shiva Prasad, JNC SAR, Bangalore, India &
S. R. Dhakate, CSIR-NPL, New Delhi, India

15:35-16:00	KN	CS Gopinath (179)
16:00-16:15	IL	A.K. Sahu (279)
16:15-16:30	IL	Santoshkumar D Bhat (273)
16:30-16:40	OL	Anurag Prakash (158)
16:40-16:50	OL	Aniruddha Jaiswal (222)
16:50-17:00	OL	Aditya Kumar (84)

Session 9

Poster Presentations

Coordinator: Vipula, IIT Delhi

Chairs: Yuvraj S. Negi, IIT Roorkee, India &
VK Gite, NMU, Jalgaon, India

17:00-17:05	C-15	Shashank Chaturvedi (23)
17:05-17:10	C-16	Balaji Suhruth Padakanti 268)
17:10-17:15	C-17	Rohit Sharma (191)
17:15-17:20	C-18	Anirudh Sharma (193)
17:20-17:25	C-19	Neha (195)
17:25-17:30	C-20	Alisha Lalhall (196)
17:30-17:35	C-21	SM Mohammed (198)
17:35-17:40	C-22	Shiva Singh (208)
17:40-17:45	C-23	Nishant Chandel (241)
17:45-17:50	C-24	Deepak Kumar (245)
17:50-17:55	C-25	Jyoti Rawat (257)
17:55-18:00	C-26	Pandurang A Dalavi (261)
18:00-18:05	C-27	Krishan Shetty (264)
18:05-18:10	C-28	Meenakshi Chauhan (213)

Session 7

Herbal Nanotherapeutics

Coordinator: Vandana Kumari, IIT Delhi

Chairs: Sunita Rattan, Amity, Noida, India &
Yashveer Singh, IIT Ropar, India

15:35-16:00	KN	Pralay Maiti (32)
16:00-16:15	IL	Surya Bhan (20)
16:15-16:30	IL	Shivani Ghildiyal (172)
16:30-16:40	OL	Bhargav V Bhide(169)
16:40-16:50	OL	Karthiga Rajendaran (187)
16:50-17:00	OL	Sakshi Badyal (183)

Session 10

Poster Presentations

Coordinator: Rohini Verma, IIT Delhi

Chairs: Ajeet Kumar, CSIR-NPL, New Delhi, India &
Pallavi Kushwaha, CSIR-NPL, New Delhi, India

17:00-17:05	P-1	Akanksha Roberts (25)
17:05-17:10	P-2	Manika Chaudhary (43)
17:10-17:15	P-3	Ankur Rana (86)
17:15-17:20	P-4	Subhasis Mahari (94)
17:20-17:25	P-5	Samridhi Chopra (97)
17:25-17:30	P-6	Pallvi Dariyal (105)
17:30-17:35	P-7	Pinki Malik (109)
17:35-17:40	P-8	K. Manjunatha (116)
17:40-17:45	P-9	Akash Kumar Singh (189)
17:45-17:50	P-10	Athira Vijayan (227)
17:50-17:55	P-11	S Vishnu Priya (228)
17:55-18:00	P-12	R Sasikala (229)
18:00-18:05	P-13	Baby Sri Pratha G (232)



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Session 11

Student Oral Contest

Coordinator: Pratibha Singh, IIT Delhi

Chairs: Deepak Pathania, SVPCU, Mandi, India &
Rajesh Sharma, Soolini University, Solan, India

09:00-09:10	OL	Rimjhim Yadav (251)
09:10-09:20	OL	Dalip Saini (21)
09:20-09:30	OL	Sitakshi Gupta (152)
09:30-09:40	OL	Suparna M Basu (206)
09:40-09:50	OL	Dheeraj Sah (110)
09:50-10:00	OL	Ankita Sharma (13)
10:00-10:10	OL	Shabnam Thakur (27)
10:10-10:20	OL	Neha (195)
10:20-10:30	OL	Sheetal Issar (238)

Session 12

Nanofabrication & Energy Devices

Coordinator: Vipula, IIT Delhi

Chairs: Ashavani Kumar, NIT Kurukshetra, India &
Sushil Kumar, CSIR-NPL, New Delhi, India

09:00-09:25	KN	Rajiv Prakash (253)
09:25-09:40	IL	Kuldeep Singh (278)
09:40-09:55	IL	Raj Kishore Sharma (275)
09:55-10:10	IL	Jeyanthinath Mayandi (271)
10:10-10:20	OL	Javed Muhommad (194)
10:20-10:30	OL	Arpita Nandy (248)
10:30-10:40	OL	P. R. Behera (178)

Session 13 : Innovation Session

Herbal Nanotherapeutics Microsymposium

Coordinator: Manali Somani, IIT Delhi

Chairs: Surya Bhan, NEHU, Shillong, India &
Rahul Sherkhane, AIIA, Varanasi, India

09:00-09:25	KN	Jayakumar Rangasamy (174)
09:25-09:35	OL	Medha (17)
09:35-09:45	OL	Indra B. Basumatary (14)
09:45-09:55	OL	Chetna Verma (47)
09:55-10:05	OL	Sanjay R Kumavat (45)
10:05-10:15	OL	Archana (81)
10:15-10:25	OL	Jaspreet (74)
10:25-10:35	OL	Amita Santra (258)
10:35-10:45	OL	Ganesh Tambe (180)

Session 14

Coordinator: Chetna Verma, IIT Delhi

Chairs: A. K. Ghosh, IIT Delhi, India & Atsushi Suzuki, YNU, Yokahama, Japan

11:00-11:35	Plenary Talk	Suprakash S Ray
11:35-12:10	Plenary Talk	Emannuelle Lacaze
12:10-12:45	Plenary Talk	Sabu Thomas

12:45-13:30 | Lunch Break



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Session 15**Nanomaterials in healthcare**

Coordinator: Ankita Sharma, IIT Delhi

Chairs: Laura Teodori, Univ Rome, Italy & MS Alam,
Jamia Hamdard, New Delhi, India

13:30-13:55	KN	Asish Pal (277)
13:55-14:10	IL	Dipankar Mandal (171)
14:10-14:25	IL	Yashveer Singh (85)
14:25-14:35	OL	Pooja Shandilya (233)
14:35-14:45	OL	Vaidehi B.R. (61)
14:45-14:55	OL	Shamayita Patra (59)
14:55-15:05	OL	Manju Sharma (76)
15:05-15:15	OL	Aleena Gauri (215)

Session 16**Nanomaterials & Nanofabrication**

Coordinator: Pratibha Singh, IIT Delhi

Chairs: Amarjeet Kaur, Delhi University, India &
Somnath C. Roy, IIT Madras, India

13:30-13:55	KN	Dirk Kuckling (230)
13:55-14:10	IL	Manu Vashishtha (104)
14:10-14:25	IL	V. P. Sharma (214)
14:25-14:35	OL	Saraswathi B (156)
14:35-14:45	OL	Sunil K. Sharma (226)
14:45-14:55	OL	Anupam Singh (54)
14:55-15:05	OL	Monika Srivastava (235)
15:05-15:15	OL	Mayank Pal (166)

Session 17**Nanomaterials & Nanocomposites**

Coordinator: Manali Somani, IIT Delhi

Chairs: Pranee Phinyocheep, Mahidol Univ., Bangkok,
Thailand & Satyendra Mishra, NMU, Jalgaon, India

13:30-13:55	KN	Philippe Roger (96)
13:55-14:10	IL	Vikas Gite (49)
14:10-14:25	IL	Anil K Thakur (161)
14:25-14:35	OL	Murali Ragothaman (113)
14:35-14:45	OL	Maruthi Yeggada (168)
14:45-14:55	OL	Dipti Saxena (114)
14:55-15:05	OL	Anuradha Roy (247)
15:05-15:15	OL	Ashwini Chauhan (260)

15:15-15:30 | Tea Break**Session 18****Poster Presentations**

Coordinator: Ankita Sharma, IIT Delhi

Chairs: Aditi Sangal, Amity, Noida, India & Susheel
Kalia, IMA, Dehradun, India

15:30-15:35	C-29	Tapaswini Jena (8)
15:35-15:40	C-30	Roshni Pattanayak (28)
15:40-15:45	C-31	Nurjahan Khatun (34)
15:45-15:50	C-32	Anirudh S (41)
15:50-15:55	C-33	Avneet Kour (44)
15:55-16:00	C-34	Srijita Paul (46)
16:00-16:05	C-35	Vasudha Hasija (71)
16:05-16:10	C-36	Swati Thakur (92)
16:10-16:15	C-37	Suvrajyoti Mishra (102)
16:15-16:20	C-38	Priya Nagraik (108)
16:20-16:25	C-39	Neelam Thakur (185)
16:25-16:30	C-40	Kirti Sharma (186)
16:30-16:35	C-41	Akshatha C (204)
16:35-16:40	C-42	Jyoti Dhatwalia (26)

Session 19**Poster Presentations**

Coordinator: Pratibha Singh, IIT Delhi

Chairs: P. Wadgaonkar, NCL Pune, India &
Ajay Bansal, NIT, Jalandhar, India

15:30-15:35	C-43	Th. Abhishek Singh (190)
15:35-15:40	C-44	Vandana Kumari (16)
15:40-15:45	C-45	Dalip Saini (21)
15:45-15:50	C-46	Uzma Hasan (211)
15:50-15:55	C-47	Manali Somani (15)
15:55-16:00	C-48	Mohammed Nadim S (262)
16:00-16:05	C-49	Neeraj Tejwan (210)
16:05-16:10	C-50	Madhushree Hegde (216)
16:10-16:15	C-51	Shweta Sharma (30)
16:15-16:20	C-52	T Sharika (95)
16:20-16:25	C-53	Sangita Tripathy (136)
16:25-16:30	C-54	Vaishali Saroha (231)
16:30-16:35	C-55	Debasmita Mohanty (221)
16:35-16:40	C-56	Sakchi Bhushan (239)
16:40-16:45	C-57	Aastha Gupta (51)
16:45-16:50	C-58	Nisha Yadav (243)

Session 20**Poster Presentations**

Coordinator: Rohini Verma, IIT Delhi

Chairs: VN Singh, CSIR-NPL, New Delhi, India &
Ashok Kumar, CSIR-NPL, New Delhi, India

15:30-15:35	P-14	Punyapriya Mishra (10)
15:35-15:40	P-15	Satvir Singh (12)
15:40-15:45	P-16	Anushka Garg (56)
15:45-15:50	P-17	Narlawar Sagar S (67)
15:50-15:55	P-18	Prerna (69)
15:55-16:00	P-19	Jyoti Rani (70)
16:00-16:05	P-20	Abhinav Lal (125)
16:05-16:10	P-21	Zinnia Mallick (137)
16:10-16:15	P-22	Sitakshi Gupta (152)
16:15-16:20	P-23	Pankaj K Kushwaha (192)
16:20-16:25	P-24	Neesha Tulsidas (202)
16:25-16:30	P-25	Towseef Ahmad (205)
16:30-16:35	P-26	Rahul Kumar (217)



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Session 21

Poster Presentations

Coordinator: Chetna Verma, IIT Delhi

*Chairs: Ajit Mahapatra, Delhi University, India &
Anil Thakur, Doon University, Dehradun, India*

17:00-17:05	P-27	Anup K Kalita (57)
17:05-17:10	P-28	Sagar Vikal (68)
17:10-17:15	P-29	Sudip Naskar (121)
17:15-17:20	P-30	Manoj Kumar (122)
17:20-17:25	P-31	Bidya Mondal (123)
17:25-17:30	P- 32	Anand Babu (130)
17:30-17:35	P-33	Varun Gupta (138)
17:35-17:40	P-34	Ajay Kumar (140)
17:40-17:45	P-35	Bhanu Prakash (143)
17:45-17:50	P-36	Tejashree Amberkar(147)
17:50-17:55	P-37	Karsimran Singh (154)
17:55-18:00	P-38	Nikhil (218)
18:00-18:05	P-39	Jai Dev Tanwar (267)

Session 22

Poster Presentations

Coordinator: Pratibha Singh, IIT Delhi

*Chairs: Sunil Kushvaha, CSIR-NPL, New Delhi, India &
Bhanu Pratap Singh, CSIR-NPL, New Delhi, India*

17:00-17:05	P-40	Ankur Kumar (184)
17:05-17:10	P-41	Rais Ahmad Dar (212)
17:10-17:15	P-42	Nikhil (219)
17:15-17:20	P-43	Rutam Biswal (236)
17:20-17:25	P-44	Sheetal Issar (238)
17:25-17:30	P- 45	Nilesh Choudhury (242)
17:30-17:35	P-46	Deepak Kumar (245)
17:35-17:40	P-47	Rimjhim Yadav (251)
17:40-17:45	P-48	Ravi Prakash (252)
17:45-17:50	P-49	Saurabh Rawat (255)
17:50-17:55	P-50	Arti (263)
17:55-18:00	P-51	Shamma Jain (266)
18:00-18:05	P-52	Rajiv Kashyap (9)

Session 23

Poster Presentations

Coordinator: Manali Somani, IIT Delhi

*Chairs: Raj Kishore, Delhi University, India &
Ritu Srivasatva, CSIR-NPL, New Delhi, India*

17:00-17:05	P-53	Shivam Tiwari (33)
17:05-17:10	P-54	Virendra Kumar (36)
17:10-17:15	P-55	Hari Krishna Mishra (48)
17:15-17:20	P-56	Aditi M. Chavan (75)
17:20-17:25	P-57	Sonali R. Kamble (78)
17:25-17:30	P- 58	Pravesh Kumar Yadav (80)
17:30-17:35	P-59	Saurav Kumar Ojha (90)
17:35-17:40	P-60	Piyush Mishra (101)
17:40-17:45	P-61	Dheeraj Sah (110)
17:45-17:50	P-62	Kalpana (146)
17:50-17:55	P-63	Megha Pant (220)
17:55-18:00	P-64	Manoj Sathwane (201)
18:00-18:05	P-65	Srishti Dehmiwal (249)
18:05-18:10	P-66	Sakshi (250)
18:10-18:15	P-67	Yaswanth P. M. (165)



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Session 24

Nanofibrous Systems

Coordinator: Pratibha Singh, IIT Delhi

Chairs: Manjeet Jassal, IIT Delhi, India & Bimlesh Lochab, Shiv Nadar Univ., Dadri, India

09:00-09:15	IL	Bhanu Nandan
09:15-09:25	OL	Prasanta K Panda (7)
09:25-09:35	OL	Sravanya Konchada (66)
09:35-09:45	OL	Garima Joshi (115)
09:45-09:55	OL	Darshna (141)
09:55-10:05	OL	G Ramar (203)

Session 25

Nanomaterials & Nanocomposites

Coordinator: Manali Somani, IIT Delhi

Chairs: VK Gupta, RIL, Mumbai, India & Shantanu Bhowmick, Amrita, Coimbatore, India

09:00-09:15	IL	Mangala Joshi (281)
09:15-09:25	OL	Rishpreet Kaur (164)
09:25-09:35	OL	Ranjana Yadav (3)
09:35-09:45	OL	Shikha Chouhan (148)
09:45-09:55	OL	E. Jaisankar (98)
09:55-10:05	OL	Ipsita Pattanayak (89)

10:10-10:30 | Tea Break

Session 26

Nanomaterials in healthcare

Coordinator: Vipula, IIT Delhi

Chairs: W. J. Kim, POSTECH, South Korea & Pralay Maiti, IIT BHU, Varanasi, India

10:30-10:40	OL	Ambika Jindal (29)
10:40-10:50	OL	Siva C. Chabattula (124)
10:50-11:00	OL	Sudha Varadaraj (135)
11:00-11:10	OL	Deepa Negi (22)

Session 27

Nano Drug Delivery

Coordinator: Vandana Kumari, IIT Delhi

Chairs: Garima Agrawal, IIT Mandi, India & Shamayita Patra, SVIT, Indore, India

10:30-10:40	OL	Priya Gupta (149)
10:40-10:50	OL	Nimish Shah (64)
10:50-11:00	OL	Manjot Kaur (99)
11:00-11:10	OL	Ankita Dhiman (55)

12:00-13:00 | Valedictory Session

Coordinator: Chetna Verma, IIT Delhi

Welcome Address Smita Mohanty (CIPET, Bhubaneswar, India), Organizing Chair

APA Address Bhuvanesh Gupta (IIT Delhi, India), President APA, Honorary Chair

Theme Address Anup K Ghosh (IIT Delhi, India), Conference Chair

Valedictory Address & Award Ceremony Jöns Hilborn (Univ. of Uppsala, Sweden), Chief Guest

S K Nayak (Former Director General of CIPET, India), Guest of Honour

Vote of Thanks S. P. Singh (CSIR-NPL, New Delhi, India), Organizing Chair