

Young Minds of Bihar Empowered by Multidisciplinary frontiers research for Vikshit Bihar

Aryabhatta Center for Nanoscience and Nanotechnology

Aryabhatta Knowledge University, Patna, web site link <http://acnn.akubihar.ac.in>

Globally Recognized Frontiers Nanoscience and Nanotechnology subject For M.Tech and Ph.D. courses

For Engineering Graduates(B.E/B.Tech) and Science Post-Graduate(M.Sc)



Hon'ble Chancellor(Governor) and Hon'ble CM, Bihar, Hon'ble Education minister with other dignitaries and , some higher Govt. officers, students/scholars from different parts of sate/country and academicians visited/appreciated world class Nanotechnology center/ Research activities. **Prof. S N Guha**, founder Vice Chancellor with Hon'ble CM , Bihar at the official inauguration of nanotechnology Center.

Vice Chancellor Message



Nanoscience and nanotechnology center one of the best frontiers research based academic center of AKU so committed and produced cutting edge research related to nanotechnology in Engineering, Agriculture, nanotechnology in Indian knowledge system and open a new window of frontiers knowledge for vikshit Society.

Prof.(Dr) Sharad Kr Yadav
(Vice Chancellor)

HOD MESSAGE



Nanoscience and Nanotechnology center of AKU established a proven record of research and innovation in Engineering, Energy & Environment, Waste to wealth & Knowledge, Nano Electronics materials, Indian Knowledge system, and Nanomedicine through nurturing/ exploring of basic & applied sciences. We will continue to carry the vision of our of Hon'ble chief minister Sri Nitish Kr Ji, founder Vice Chancellor **Prof. S N Guha** and as citizen of India State Bihar a truly global frontiers knowledge superpower for Vikshit Bihar & India and scientific society. We are thankful to **Dept. of Education, Govt. of Bihar and Aryabhatta Knowledge University Patna** for functioning and Establishing of nanoscience and nanotechnology center- Industry relavance & progress of frontiers knowledge based academic center.

Dr. Rakesh Kumar Singh
(Head Of the Centre)

Young Minds of Bihar Empowered by Multidisciplinary frontiers research for Vikshit Bihar

World class Nanotechnology center for M.Tech, Ph.D. studies for M.Sc(Science) & Engineering Graduates

- The Nanoscience and nanotechnology center of Aryabhatta knowledge University was Established by the founder Vice Chancellor Prof. S N Guha with whole hearted support and encouragement from Honorable Chief minister Sri Nitish Kumar Ji. The first academic session of M.Tech and Ph.D. started from academic from year 2013.
- Different affairs of academic, research & development programme are being carried out under the leadership of Dr. Rakesh Kumar Singh, head of the Nanoscience center , who have been also awarded “ Best Young Teacher with Contributions in modern field of Nanoscience” by Hon'ble Chancellor of university of Bihar cum Governor for his outstanding performance.
- In the last 10 year more than 1000 eminent academicians/Scholars from different parts of world/country/state visited Nanoscience center of Aryabahtta Knowledge University. About more than 200 research papers published/ final progress in SCI/Scopus/WoS/Peer reviewed Journals by Nanotechnology center in multidisciplinary area of Science, Engineering & technology including Engineering Science, Agriculture, Electronics, Medicine, Food, and Ayurveda and Basic Sciences.
- 5 patents and 2 prototype have been filed/developed using engineering/functional nanomaterials Engineering devices, Agriculture fertility, purification of water and energy & Environment and some others. Some startup establishment for vikshit Bihar and India are in progress
- Scientists/Academicians of About More than 100 countries of the world including China, USA, UK, Germany, others cited/appreciated/read the frontiers research activities of the nanoscience center. The International level research activities and world class scientific infrastructure can be seen-<http://acnn.akubihar.ac.in>.



Hon'ble Chief minister of Bihar Sri Nitish Kr Ji, specially appreciated research activities of Nano science and Nanotechnology center of AKU Patna.

Start Up Established for entrepreneurship and Product development related to Nanotechnology for the developemnt of Vikshit Bihar: Strong cohesive research Ecosystem Established

Faculty member Dr. Abhay Kr Aman (Ph.D. alumnus of Nanotechnology center) and Mr. Ashutosh Kr (Ph.D. scholar of session 21-24) selected for 10 lakh grant by Dept. of industries, Govt. of Bihar. Both students worked under the supervision of Dr. Rakesh Kr Singh, Head of nanotechnology. These start up will focuses on nanomaterial research-driven initiative focused on advancing scientific exploration and technological innovation and - product-based venture dedicated to developing and commercializing high-performance nanomaterials.



Dr. Abhay Kr Aman(Innovator)



Mr. Ashutosh Kr(Innovator)

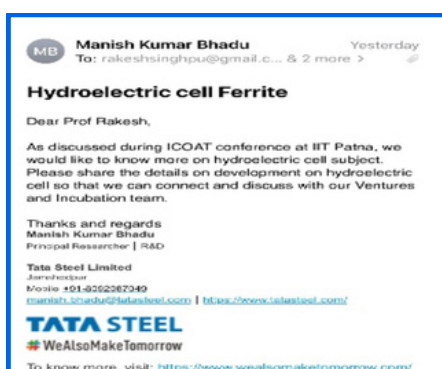


Dr. Rakesh Kr Singh (Mentor): Industry Relevance innovation

एक्यू के फैक्ट्री व शोशाथी के स्टार्टअप को मिले 10 लाख
जागरण संवाददाता, पटना
आर्यभट्ट ज्ञान विश्वविद्यालय (एक्यू) पटना के स्कूल आफ नैनोसाइंस एंड नैनोटेक्नोलॉजी के फैक्ट्री डा. अभय कुमार अमन और शोशाथी आशुतोष कुमार के स्टार्टअप को बिहार स्टार्टअप योजना के तहत 10 लाख रुपये मिले हैं। कुलपति प्रो. राखेश कुमार यादव ने कहा कि यह सफलता विश्वविद्यालय की अकादमिक उत्कृष्टता और शोध में नवाचार की प्रतिबद्धता का प्रतीक है। डा. अभय पूर्ववर्ती छात्र भी हैं। डा. अमन और आशुतोष ने सफलता का श्रेय विभागध्यक्ष डा. राकेश कुमार सिंह को दिया है।



Nanotechnology Research for Mass communities presented on the occasion of Bihar Diwas and awarded by Govt. of Bihar and appreciated by Dr. U K Misra Vice president of BSDMA-Govt. of Bihar and Sri Manish Verma(IAS)-advisor to Hon'ble CM of Bihar Sri Nitish Kr Ji.



Proven record of research appreciated by Tata Steel and Scientific Infrastructure creation with IIT Patna & Central Universities : Innovations and Visionary Plan appreciated

Knowledge Partner/ Collaborators for Academic progress

Nanotechnology Students & faculty members of AKU have been working for the development in Engineering Nanomaterials, Nanomedicine, functional nanomaterials for the Energy and Industry establishment with collaboration with faculty/scholar of following Institute.

- Indian Institute of Technology (IIT) Patna
- National Institute of Ayurveda, Jaipur
- CSIR-NPL Delhi
- Atal Incubation center, Niti Ayog Govt. Of India (Patna Unit)
- Chandra Gupta Institute of Management(CIMP) Patna
- A N College Patna(NAAC- Grade and Center for Excellence of UGC)
- National Institute of Technology(NIT) Patna
- National Anveshika Network of India(Indian Association of Physics teachers), coordinated by Padma Shree Prof. H C Verma, IIT Kanpur

Career/ Job prospects of M.Tech and Ph.D. in Nanoscience and Nanotechnology Courses:

Nanoscience and Nanotechnology is an interdisciplinary research based technical and professional science, in which person from basic science, applied Science/Engineering, Medical science, Ayurveda , Agriculture can pursue a career for Atma Nisbharbharat society and development of frontiers knowledge. At present nanoscience and nanotechnology programme are being offered in India at more than 50 institutions from Graduation level to Doctoral research, in which some of the organizations are following –

- Aryabhatta Knowledge University, Patna,
- Punjab university Chandigarh
- University of Rajasthan,
- Institute of Nanoscience & Nanotechnology Mohali
- National Forensic Science University- an Institution of National Importance under ministry of home affairs, Govt. of India
- Pandicherry university,
- Symbiosis University Hospital & Research Center
- S N Bose National Center for Basic Sciences,
- JNU-Delhi
- Delhi University,
- Amity university,
- VIT

- SRM University
- Center for Nano & Soft Matter Sciences Bangalore ,
- NIT-Bhopal
- IIT Bombay
- I.I.Sc Bangalore
- Amrita University
- JIS university
- Dr. A P J Kalam technical university Lucknow
- Banasthali Vidyapith and Various others places.

Till date about more than 1000 nanotechnology based products are in the global market

Sectors of M.Tech/ M.Sc/Ph.D. in Nanoscience and Nanotechnology degree for Job/Career.
In addition to these sector, there are endless job/career opportunities for Vikshit Society

Executive Positions	Related Sectors/ Nature of Job/ Product
<ul style="list-style-type: none"> • Professor/Lecturer/ Scientists/ Scientific Officer 	<ul style="list-style-type: none"> • Colleges/Universities/ Specialized research Institute, as mentioned above
<ul style="list-style-type: none"> • Research officer/ Energy Manager/ Chief Executive Officer (VEO) 	<ul style="list-style-type: none"> • In DRDO, BARC, Nano mission of DST-Govt. of India, Various CSIR laboratories,
<ul style="list-style-type: none"> • Startup Innovator/ Job Creator/ Employee as a Director / Chairman/ CEO and various others 	<ul style="list-style-type: none"> • Hindustan Petroleum Corporation Limited(HPCL), Bharat Heavy Electricals Limited(BHEL) • Various start up sector, Pharmaceutical industries and Electronics Industries.



पीएम रिसर्च फैलोशिप के लिए एकेयू के शशांक का चयन
जागरण संवाददाता, पटना : आर्यभट्ट नालेज यूनिवर्सिटी (एकेयू) के नैनोसाइंस व नैनोटेक्नोलॉजी केंद्र के एमटेक के विद्यार्थी शशांक भूषण दास को प्रधानमंत्री रिसर्च फैलोशिप स्कमी के तहत आइआईटी मद्रास ने चयन किया है। विभागाध्यक्ष डा. राकेश कुमार सिंह ने बताया कि शशांक नैनो इलेक्ट्रॉनिक्स पदार्थ के क्षेत्र में शोध कर रहे हैं। इनका 10 से अधिक शोध पत्र अंतरराष्ट्रीय जर्नल में प्रकाशित हो चुका है। (जासं)

Students and Faculty member of Nanoscience center contributed in various nation building programme, awarded in Governor house, Patna and awarded Prime minister fellowship for frontiers research.

Young Minds of Bihar Empowered by frontiers research and New Inventions for Vikshit Bihar

World class Nanotechnology center for M.Tech, Ph.D. studies for M.Sc(Science) & Engineering Graduates

General Instructions for 4-Semester Postgraduate Programme Leading to the Degree of M.Tech (Nano Science & Technology)

Fellowship as per AICTE rule and sponsored by some Industries are available

• General Information

- The M.Tech. Course on is being conducted by the Aryabhatta Centre for Nanoscience & Nanotechnology (ACNN), Aryabhatta Knowledge University, Patna. Each semester will be at least 90 working day duration. Every enrolled student will be required to do a specified course work and also complete a project/dissertation if any either in the ACNN or at other National Labs/Institutions.
- The total number of seats for the course is 20 (twenty). Reservation of SC/ST/OBC/PH/Women candidates will be done as per the University norms

• Minimum Eligibility for Admission

- M.Sc. or equivalent degree in Physics/ Chemistry/ Electronics/ Electronics Science/Material Science/Biotechnology/Agriculture/Life science, with not less than 55% aggregate marks for General Category & 50% for all reserved categories in the absolute system of equivalent grade.

OR

- Bachelor's degree in Electrical/ Mechanical/ Electronics & Communication/ Computer Engineering/ Instrumentation/ Computer Science/ Chemical/ Biochemical Engineering/ Medical/ Veterinary Sciences or equivalent, with not less than or 60% aggregate marks for General Category & 55% for all reserved categories in the absolute system or equivalent grade.

• Mode of Admissions

- Admission to M.Tech. programme will purely on the combined merit list or M.Tech. Admission Entrance Test conducted by Aryabhatta Knowledge University and performance at qualifying examination.

- **General Instruction for 3 year Ph.D. programme in Nanoscience and nanotechnology as per UGC regulation(details can be seen acnnakubihar.ac.in).**

Established Legacy of frontiers Research and new Knowledge for Young Minds of state Bihar

भारत सरकार के सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय के 60 छात्र-छात्राओं ने एकेयू की प्रयोगशालाओं का भ्रमण किया

पटना | भारत सरकार के सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय के 60 छात्र-छात्राओं ने आर्यभट्ट ज्ञान विश्वविद्यालय के सेंटर ऑफ नैनो साइंस एंड टेक्नोलॉजी के प्रयोगशालाओं का भ्रमण किया। छात्र-छात्राओं ने एकेयू के 7 विभिन्न प्रयोगशालाओं में हो रहे इंजीनियरिंग नैनोमेटिरियल्स को तैयार करने की विधि तथा इसका उद्योग, पर्यावरण, कृषि, हरित ऊर्जा, स्वास्थ्य के उपयोग को समझा। आईआईटी कानपुर के प्रख्यात शिक्षक प्रो एचसी वर्मा, के द्वारा स्थापित अन्वेषिका के छोटे-छोटे प्रयोग एवं इसका प्रौद्योगिकी, दैनिक जीवन में उपयोग पर एक सेमिनार डा राकेश कुमार सिंह द्वारा संचालित किया गया। इस अवसर पर एकेयू के कुलपति प्रो शरद कुमार यादव ने सभी 60 छात्रों को रिसर्च, नवाचार एवं आत्मनिर्भर व विकसित समाज के निर्माण में योगदान देने हेतु प्रेरित किया।



नैनो टेक्नोलॉजी लैब पहुंचे छात्र

पटना | सीबी रमन विश्वविद्यालय वैशाली के कृषि विज्ञान के 75 छात्रों और संकाय सदस्यों ने शनिवार को एकेयू में कृषि विज्ञान अनुसंधान में नैनो टेक्नोलॉजी लैब का दौरा किया। छात्र और संकाय सदस्य विशेष रूप से नई तकनीक के अनुसंधान को देखने के लिए बहुत उत्साहित रहे। बेकार चावल की भूसी से नैनो सिलिका उत्पादन और पर्यावरणीय अनुप्रयोगों में इसके अनुप्रयोग के लिए खाद्य नैनो सामग्री को देखकर एकेयू के नैनोटेक्नोलॉजी सेंटर के प्रमुख डॉ. राकेश कुमार सिंह ने विशेष रूप से छात्रों के साथ बातचीत की।



School/Colleges/ University faculty members/Students from different parts of state Bihar Visited ongoing Nanoscience and Nanotechnology Research activities and research infrastructure of AKU and faculty member invited invited to deliver a talk from different parts of sate/nation/world :

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World class Nanotechnology center for M.Tech, Ph.D. studies for M.Sc(Science) & Engineering Graduates(B.E./B.Tech)



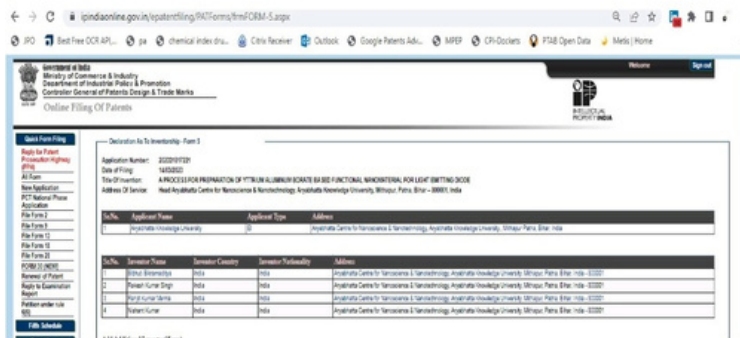
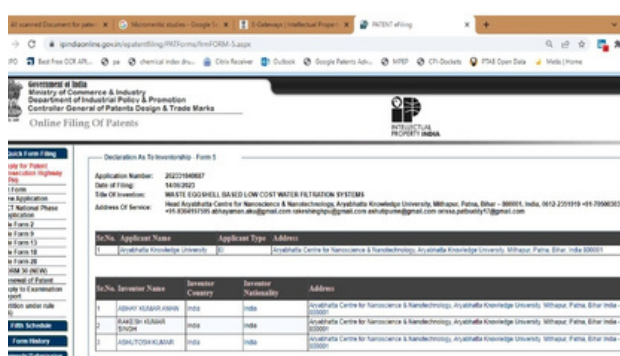
Industry Academic Convergence



Nanotechnology research appreciated by Rajbhawan and Baidyanath Ayurveda Pvt. Limited Supported translational Ayurvedic nanomedicine research fellowship to two M.Tech scholar

Present Research and Road map for Multidisciplinary Employment and Progress of frontiers knowledge

- Encourage young researchers to think out of the box and help them to think beyond academic for betterment of society. It will help in establishing linkages between academic institutes and corporate world.
- To prepare new functional Engineering nanomaterial using green approach, waste resources and other Physical & Chemical methods, studying their new science, new properties at nanoscale for its possible applications in industries, energy & environment and performance of human knowledge.
- To ensure all the major research areas of Nanoscience with major focus on agriculture, Magnetic materials, and purification of water, Green energy source, Bio- nanomaterial for its applications in better health, energy & environment sustainability.
- To focus on ancient Indian Nano medicine and their different properties measurement as evidence based medicine for its global acceptance.
- To dissemination of frontiers knowledge and inventions related to Nanoscience and nanotechnology in society/ academic institutions.
- To correlate and collaborate with different scientific research occurring in India and across the world.
- Support the development of Nanotechnology from discovery to production by start-ups, prototype and patent etc.



Patent published on Nanotechnology research with affiliation of AKU in Govt. of India Journals (Till Date 5 Patent has been published and 2 Patent billing is in process)

Proven record of Nanomaterials research in international database and creating a culture of entrepreneurship with new idea/innovations for vikshit Society: Appreciated at Global Level



Indian Knowledge system of Nanomaterials research of AKU appreciated/felicitated at Stockholm, Sweden



Nanotechnology Faculty Dr. Rakesh Kumar Singh awarded Best Teacher Award by Hon'ble Chancellor(Governor) for his outstanding Performance and Hon'ble CM, Bihar Sri Nitish Kr Ji appreciated ongoing research activities and frontiers Knowledge development .

7 World Class functional Nanotechnology Research laboratory: Beacons for Vikshit Bihar



- High Energy Ball Milling for Production of Nanomaterials



- FTIR and Impedance Analyzer measurement



- Vibrating Sample Magnetometer for Magnetic Measurement



- High temperature Muffle Furnace



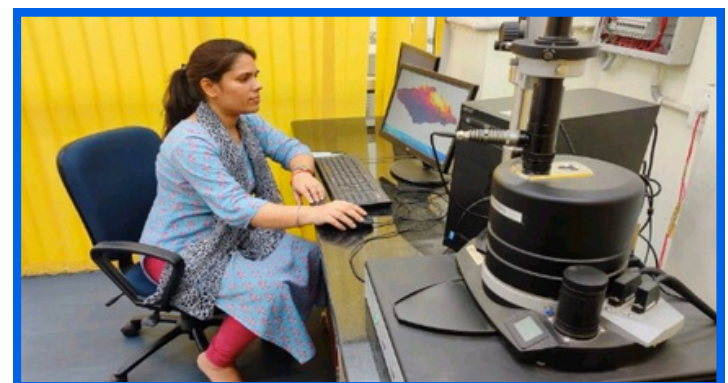
- Microinjection moulding machine for Composite



- Learning Science through Low Cost Experiment Lab (Anveshika)



- Scanning Electron Microscope



- Atomic Force Microscope and Scanning Tunneling Microscope

7 World Class functional Nanotechnology Research laboratory: Beacons for Vikshit Bihar



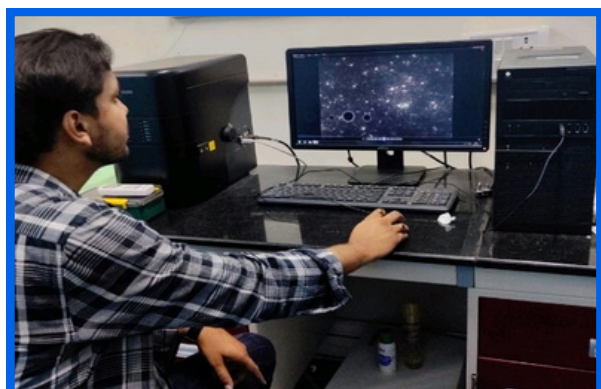
- X-ray diffractometer for crystalline size/structure measurement



- Thermal Analysis Laboratory



- UV-Visible and PL spectroscopy Laboratory



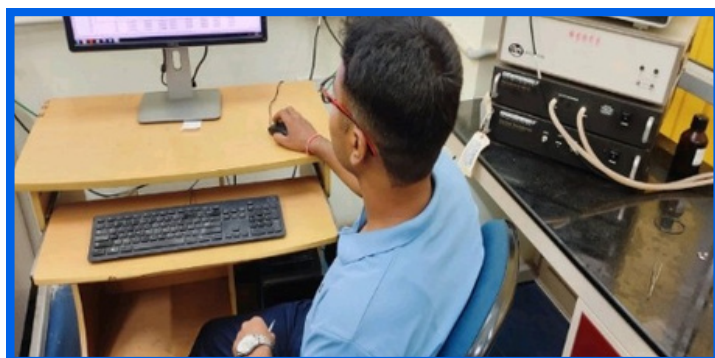
- Nanoparticle Tracking Analysis System



- Zeta Potential Measurement Lab



- Hydrothermal Technique for Material synthesis



- Multiferroic Instruments



- Nanomaterials Simulation Lab

Nanotechnology Initiative for Vikshit Bihar & Bharat and Global achievement

Empowering India Youth for global Leadership in Science & Innovation for Viksit भारत

National Science Day 2025

Organized by
Centre for Nanoscience & Nanotechnology
Aryabhata Knowledge University, Patna

Theme of the highlighted exhibition

- Waste-derived nanomaterials for applications in Agriculture and Electronics.
- Advanced Nanomaterials for Energy and Environmental applications.
- Traditional Ayurvedic Nanomedicine and Functional food for healthcare.
- Igniting Science learning through low-cost experiments at all levels of studies

Different Functional Nanomaterial innovation

नैनो प्रौद्योगिकी के कई प्रमुख क्षेत्रों पर किया गया ध्यान केंद्रित

एकेएच में विज्ञान दिवस पर लगी प्रदर्शनी को देखते अतिथि = जगद्वय जागरण समाददाता, पटना। आर्यभट्ट ज्ञान विश्वविद्यालय (एकेएच) में नैनो टेक्नोलॉजी अनुसंधान और नवाचार पर ध्यान केंद्रित करते हुए राष्ट्रीय विज्ञान दिवस मनाया गया। 'विज्ञान और नवाचार में वैश्विक नेतृत्व के लिए भारतीय युवाओं को सशक्त बनाना' विषय के तहत विश्वविद्यालय में नैनो टेक्नोलॉजी सेक्टर में किए गए नैनो मैटेरियल अनुसंधान को प्रदर्शित किया गया। प्रदर्शनी में जवाहर लाल नेहरू विश्वविद्यालय, नई दिल्ली से युवादेव रंजित कुमार के प्रो. अरविंद कुमार और सावित्रीबाई कुमारी, एके विश्वविद्यालय में रक्षा और सार्वजनिक अध्ययन विभाग के प्रो. एमरिटस और प्रो. सोपारी चारी मौजूद रहे। प्रदर्शनी में कृषि और इलेक्ट्रॉनिक्स अनुप्रयोगों के लिए, उन्नत नैनो मैटेरियल, उच्च और पर्यावरण अनुपयोगी के लिए उन्नत नैनो मैटेरियल, स्वास्थ्य सेवा के लिए पारंपरिक आयुर्वेदिक नैनो मैटेरियल और कार्यात्मक खाद्य नैनो मैटेरियल, कम लागत वाले प्रयोगों के माध्यम से विज्ञान सीखने के लिए प्रकल्पित करना शामिल था। इसकी पहल आर्यभट्ट कानपुर के पंचमी से सम्मानित प्रो. एमरिटस के नेतृत्व में की गई। इससे पहले कांशी का उपहासन विश्वविद्यालय के कुलपति प्रो. अरवि जादव ने किया। उच्चो विश्वविद्यालय में चल रही गतिविधियों की जानकारी दी।

Prof. Arbind Kr of JNU, UGC member and Prof Cheri, Pune , Economic advisor of former advisor of former PM late A B Vajpayee visited Nanotechnology research and fostering activities as next level of industry engagement.

ACADEMIA - INDUSTRY CONCLAVE
Hydroelectric Cell (HEC)
Nanotechnology Revolutionizing Energy Generation

Prof. (Dr.) Sharad Kumar Yadav
Hon'ble Vice-Chancellor
AKU, Patna

Dr. R K Kotnala
Former Chairman NADL- Delhi

Prof. (Dr.) Rana Singh
Director, CIMP

Yogesh Brahmanekar
Innovation Director
MoC's Innovation Cell
Government of India

Prof. (Dr.) Rakha Kumari
Hon'ble Higher Education
Department
Government of Bihar

Dr. Jyoti Shah
Chief Scientist
CSIR-NPL, Delhi

Shri Kumod Kumar
CEO, CIMP-BIH
CEO, CIMP

Dr. Rakesh Kr Singh
Head, Nanoscience and
Nanotechnology Center AKU, Patna

CONCLAVE HIGHLIGHTS

- HEC generates electricity with just a few drops of water.
- Completely eco-friendly: No toxic emissions or disposal issues.
- No external energy or chemicals needed for the process.
- A groundbreaking solution for sustainable energy.

SEPTEMBER 14, 2024
11:30 AM to 01:00 PM
B-HUB, 5TH FLOOR
MAURYA LOK COMPLEX, PATNA

For Further Details Contact Us: +919128712345

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Nanoscience & Nanotechnology Physics

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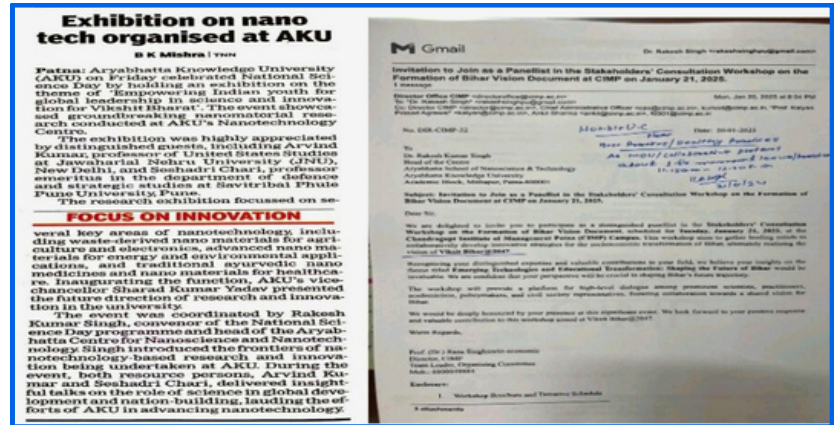
Citations 1908 **h-index** 23 **i10-index** 57

Country	Total	Trend (last week)
India	394	+5
United States	145	+
Pakistan	67	+
Nigeria	23	+
Egypt	20	+
China	20	+

Nanomaterials Research of Aryabhata Knowledge University(State Govt. university) Citation reported from Germany and Switzerland based research organization. Head of nanotechnology center were invited to deliver a talk by global scientific communities including central universities, IIT, NIT. Dept. of Education, Govt. of Bihar and Aryabhata Knowledge University Patna acknowledgement appreciated for establishing & functioning of Nanoscience center.

Significant Academic Contributions: Showcasing the Nanotechnology research on the Global stage

World class Nanotechnology center for M.Tech, Ph.D. studies for M.Sc (Science) & Engineering Graduates



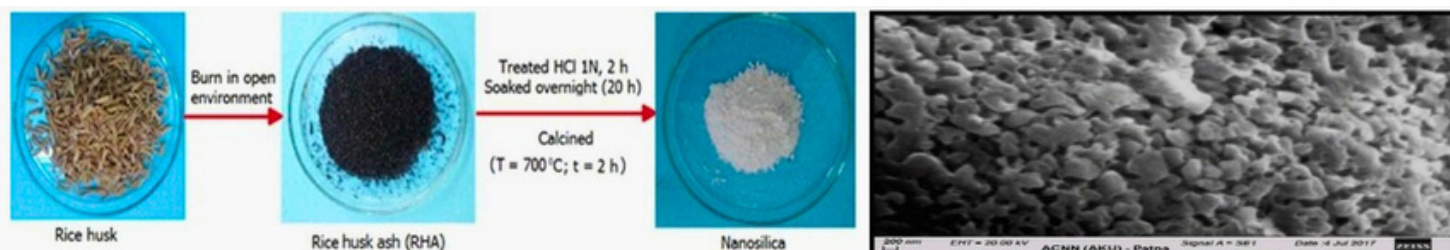
7 New magnetic nanomaterial discovered for its applications from Electronics to Biomedical science, Focus on Innovations and cutting edge Research support from Govt and Professional Scietific society.



Nanotechnology research on Indian Knowledge System- Ayurvedic Bhasma as Nanomedicine, Functional food Nanomaterials, Engineering Nanomaterials for its applications from Electronics to Climate changes, visited by Hon'ble Chief minster Sri Nitish Kr Ji, Hon'ble Education minister Sri Sunil Kr Ji, Prof. Rekha Kumari Director higher education, Prof. A C Pandey Director IUAC-UGC Delhi, Prof. R K Kotnala Eminent Scientist CSIR-NPL Delhi, Padma shree Prof. H C Verma, IIT Kanpur, Padma shree Prof. K L Chopra, former director IIT Khargapur several Sweden, Japan and Bangalore based scientist.

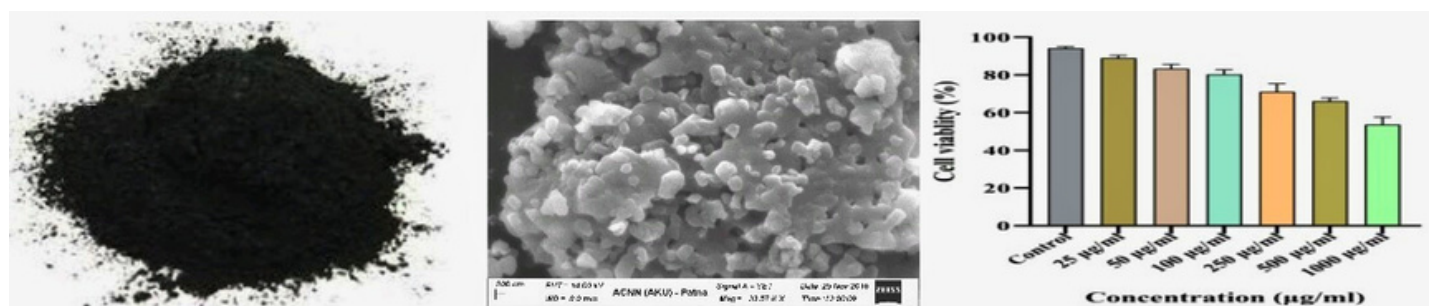
Dependence to Self-Reliance: Nanotechnology research of Bihar & Impact for the World

Some more Proven record of Nanomaterials research in International data base and Innovations for Vikshit Society: Research/Patent/ Prototype published/ Developed.



Production of multifunctional Silica materials as Nanometric scale from Agriculture waste Rice husk for its applications In fertilizer, cement, rubber, drug delivery and Electronics industries.

Conversion of waste into wealth & Knowledge



Studies on various Ayurvedic Bhasma as Nanomaterials by employing modern scientific tools: Glorious Indian Past and their Innovations. Prepared Bhasma, microstructure and their toxicities studies as evidence-based nanomedicine for global acceptance: Lab to Legacy enrichment



Patent published and Prototype developed-Multifunctional Calcium based nanomaterials from waste egg shell for growth of Plant, purification of water and high energy band gap materials: Conversion of waste into wealth and Knowledge



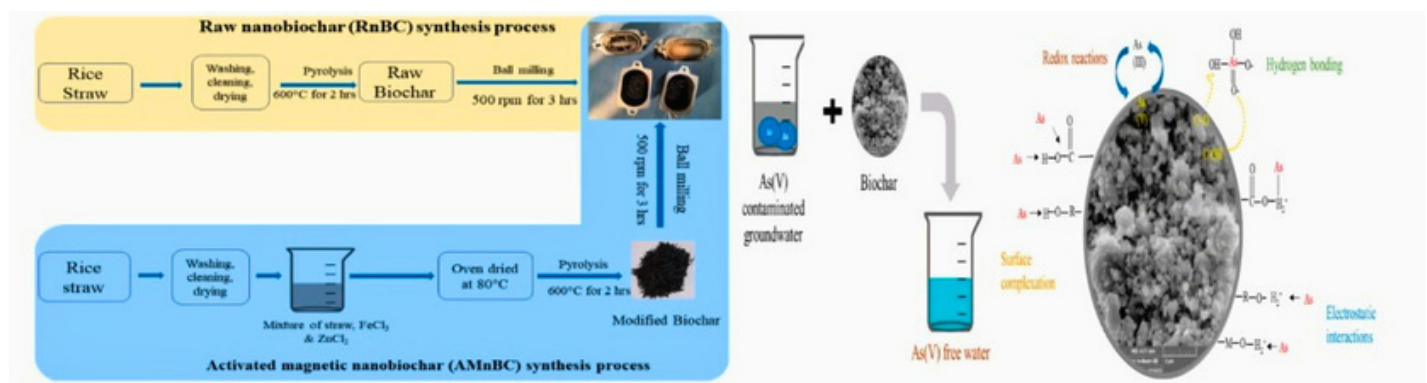
Preparation of superfine Turmeric / Ginger / Cinnamon bark / Bitter melon nanocrystalline powder and estimation of structural and functional properties for its applications from Agriculture to better health. Production of such new functional food materials at nanoscale open a new window of establishment of industries in the field of agriculture, pharmaceutical/Biomedical industries for Vikshit Bihar.

Dependence to Self-Reliance: Nanotechnology research of Bihar & Impact for the World

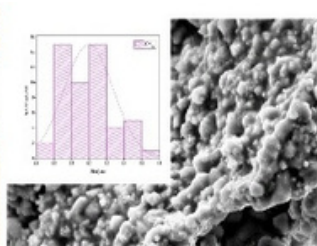
Some more Proven record of Nanomaterials research in international data base and Innovations for Vikshit Society: Research/Patent/ Prototype published/ Developed



Nanotechnology based Green Energy based Hydroelectric research : Hydroelectric Cell, Lantern, LED light, torch etc. Prepared by Nanotechnology group and start-up/Industry establishment is in progress in mentoship with eminent scientist Prof. R K Kotnala of CSIR-NPL Delhi.



Production of nano Biochar from rice straw at Nanotechnology center for its multifunctional applications in purification of water and other industries:



Production of various multifunctional ferrite magnetic functional Engineering Nanomaterials through flower, honey, expire medicine, lemon for its applications from Electronics to Biomedical sciences.



Learning Physics through low-cost Experiment at all levels of studies: Development of strong human resource in society under the coordination of Padma Shree Prof. H C Verma-IIT Kanpur- National Coordinator-National Anveshika network of India.

Nanotechnology of AKU turned into engine of frontiers research for Vikshit Society