



CENTRE FOR INNOVATION
RESEARCH AND FACILITATION
CHANAKYA NATIONAL LAW UNIVERSITY, PATNA

IP

BULLETIN

A QUARTERLY E-MAGAZINE ON IPR POLICY

| VOL I |

| ISSUE I |

| DECEMBER 2020 |

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PUBLISHER: REGISTRAR, CNLU

ISSN NO.: (to be obtained)

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ACKNOWLEDGEMENT

I express my deep gratitude to Hon'ble Vice Chancellor Justice Mrs. Mridula Mishra, Hon'ble Registrar Shri Manoranjan Prasad Srivastava, for their free hand generous support in bringing this bulletin release. I also express my profound sense of gratitude to all the contributors, all the Hon'ble members of the Editorial Board, my colleagues at CNLU. I acknowledge the sincere efforts of composition Team: Mr. Divyanshu Priyadarshi (Research Fellow), Ms. Kinjal Keya, Mr. Rajnish Prakash, Mr. Ayush Kumar and Mr. Amit Kumar (IT) for giving this bulletin a proper shape, publication and release.

ABOUT CNLU

In the State of Bihar, where the seeds of the earliest republic were sown and the crop of democracy cultivated, a need was felt by the government for a university which would provide quality legal education and strive to raise national legal standards to competitive international level and promote legal awareness in the community, which will lead to the realization of goals embodied in the Constitution of India. Thus, on July 15th, 2006 came into being Chanakya National Law University at Patna under the able guidance of its Vice - Chancellor/ Pro - Chancellor, Prof. Dr. A. Lakshminath, former Dean and Registrar, NALSAR University of Law, Hyderabad. CNLU was established under the Chanakya National Law University Act, 2006 (Bihar Act No. 24 of 2006) and included in section 2(f) & 12(B) of the U.G.C. Act, 1956.

No Educational Institution is complete without adequate facilities to its Students, Faculties & Employees. CNLU provides wide range of facilities on its campus. A well managed residential accommodation with modern facility provided to students. Mess & Canteen facilities on campus provide everything from a simple coffee and sandwich to a full meal. University provides a full range of medical services for students & for employees who register as patients. In addition to general practice services, CNLU provides a range of specialist clinics and visiting practitioners. University organised regular careers fairs, training workshops, and one-to-one guidance for students. Counseling Service aims to enable students to achieve their academic and personal goals by providing confidential counseling

and support for any difficulties encountered while at CNLU. University provides a wide range of IT services including campus internet access via a wireless network and in student residences.

Number of retired Judges of the Supreme Court, High Courts and lower Judiciary as well as Senior Advocates & Educationalist have offered to assist the CNLU in its teaching and research programmes making education at CNLU a rare and exciting experience to the student body. CNLU admired example of maintaining financial autonomy along with greater accountability. It is equipped with the state-of-art infrastructure for successful imparting of legal education of the highest standards. The faculty at CNLU comprises highly acclaimed and experienced academicians who are proactively involved in grooming the younger generation to take CNLU to greater heights.

The construction work of the university spread on 18 acres of land at Nyaya Nagar, Mithapur near Mithapur Bus stand, Jakkanpur Police Station, Patna. A sprawling lawn with various types of palm trees has adds beauty to the landscape.



ABOUT CIRF IN IPHD

Innovation is an imaginative initiative to resolve socio-economic –cultural –scientific-technological problems of everyday life. Wherever we are, innovation is required for advancement-progress-prosperity. Innovation motivates for research – searching the solution to a problem. The intellectual property is a creation of mind. It is in the form of copyright, patents, Trademarks, design, integrated circuit lay out design, trade secret, and geographical indications, bio-technological inventions, traditional knowledge, inventions related to plant varieties, farmers', and plant breeders' rights. Every types of intellectual creation is socio-economic oriented. But there is requirement of protection to the creators for their economic and moral rights involved in it. At the same time, the dissemination of intellectual property knowledge among the society is essential. The industry also requires connection and involvement.

IPR is a subject interconnected with almost all walks of human life today. The requirements of innovation in MSME cannot be denied which furthers employment in organised as well as unorganised sector. Likewise, the sports sector is closely connected with intellectual properties: patents, copyrights, design, trademarks, and traditional knowledge, etc. The tourism has become a mega source of commerce and employment, where in the innovation is every time a challenge. The National policy on IPR deals with the creation of Human capital with the same spirit that Human Rights tries to protect the Humanity.

Hence, the Chanakya National Law University aims to encourage research and innovation in IP and interconnected areas, i.e. Entrepreneurship, Sports, Tourism and Human Rights, through this Centre. The Centre will strive for the cause of economic development of the people of Bihar and all the persons/ innovators in general in IP and inter-connected areas –entrepreneurship, sports, tourism, and ultimately Human development by protecting Human Rights.

OBJECTIVES

Institutional Activities	Collaborative Activities
<ul style="list-style-type: none"> • Awareness towards intellectual property Rights through seminar /Conference/ Workshop/Symposium and Innovation March. • Institutional project research from government Institutions/Research organisations in India/Abroad. • Inter-University Collaboration for research in the field of Intellectual property. • Facilitation Centre for registration and commercialisation related activities. • Consultancy facility from expert. • Publication of 'Research Journal in IP' and 'Inter-disciplinary journal' and 'Books' • Organising Professional development program and Certificate courses. • Setting up Student IPR Club. 	<ul style="list-style-type: none"> • IP and Sports industry • IP and Tourism • Global Trade in IP and Human rights • IP and entrepreneurship. • IP, Corporate and Competition. • IP and Information security. • IP, Humanities and Human Development • Community IP, Benefit Sharing and Economic development • Collaboration with Universities, NIPER, and RESEARCH CENTRES. • Industry –University collaboration, (MSME, Startup-Standup)

INTELLECTUAL PROPERTY BULLETIN

(ISSN No.To be obtained after release)

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**Hon'ble Justice Smt, Mridula Mishra,
Vice-Chancellor**

It's a matter of great pride and pleasure that the Centre for Innovation Research and Facilitation in Intellectual Property for Humanity and Development (CIRF in IPHD) of Chanakya Law University is releasing a magazine namely: I P BULLETIN, quarterly. The Bulletin has a feature of magazine with an effort to accommodate the application of IPR in industries and significance in business, disseminate the programs of the centre, IPR discussion and debates, innovations in industries and MSME. This is a journal cum newsletter for encouraging the students' entrepreneurs, academicians, and professionals to write column, case study and judgement analysis in the field of IPR. It has aim to make the stake holders aware about IPRs. The contents are well arranged and informative. It will prove beneficial to all the stake holders. This journal is a magazine on National IPR Policy of the Govt. of India. This magazine contains the implication aspects of intellectual property, starting from awareness program, capacity building, entrepreneurship and industrial application. The IP Bulletin will work as per the policy of the government to harnessing the natural resources for employment and economic development. This bulletin discusses the crisp policies, DIPP policy towards Intellectual Property creation, industrialization and commercialization in India. This IP bulletin discusses the India's growth stories in IPR Regime despite pandemic conditions which is a proved fact with the invention of covaxon and Covisheild.

I wish all the best to the entire Team for this creative forum.

REGISTRAR'S MESSAGE



**Shree Manoranjan Prasad Shrivastava,
Registrar, CNLU.**

The IP Bulletin published by the centre is another miles stone in its venture for the dissemination of Intellectual Property among the academia, professionals, entrepreneurs, consumers etc. The academic journal carries on materials for analysis, debates and discussion, but the magazine deals with miscellaneous pieces. It discusses the current issues and opinion of the concerned persons. It widens the knowledge of the readers. With this reference, this Bulletin has been launched to provide news on IPR, application of IPR in the industries, consumers benefits, innovation by the students, awareness programs and scope in the field of IPR .The bulletin expects to present the world the application of IPR in our day to day life .How IPR has become a part and parcel of our life, industry and business and employment. This bulletin will prove a very informative forum for all the stake holders.

The National Policy on IPR is a vision document for intellectual creation, industrialization, commercialization, employment generation and economic growth. IPR is a creation of human mind which has potential to bring massive change if it is applied properly. IPR is the essential tool of entrepreneurship. This IP Bulletin intends to create awareness among the professionals, entrepreneurs, industrial and commercial worlds. The bulletin will collect and organize material for the economic development to all the stake holders in future.

I wish all success to the bulletin and All the best.

EDITORIAL NOTE



Prof. Shubhash C. Roy, Professor of Law, Dean- R&D, Director (CIRF)

The **I.P.BULLETIN** (Intellectual Property Bulletin) is a publication of the Centre for Innovation Research and Facilitation in Intellectual Property for Humanity and Development (CIRF-in-IPHD). It is a **Quarterly Magazine**, ISSNTo be obtained as per rule. It carries news, column, case reports, essay writings events and activities, research in the domain of Intellectual Property Rights. It has to carry the application of intellectual creation which are of commercial significance. Intellectual property is a creation of mind. Why does it require protection? Whether all of us are aware of the Intellectual Property? Whether Intellectual property can speedup industrialization, commercialisation and generate employment? Whether Intellectual Property can boost up **'Make in India: Made in India; 'Stand up India: Start up India'** Program? Whether Intellectual Creation have potency of making **'Self-Reliant Bharat' (Atma Nirbhar)**? The Government of India has formulated 'National I P Policy' in 2016 with a slogan **'Creative India: Innovative India'**. It aims to IPR Awareness: Outreach and Promotion , To stimulate the generation of IPR, Legal and Legislative Framework - To have strong and effective IPR laws, which balances the interests of rights owners with larger public interest, Administration and Management - To modernize and strengthen service oriented IPR administration, Commercialization of IPR - Get value for IPRs through commercialization, Enforcement and Adjudication - To strengthen the enforcement and adjudicatory mechanisms for combating IPR infringements, Human Capital Development - To strengthen and expand human resources, institutions and capacities for teaching, training, research and skill building in IPR.

The I P BULLETIN is another venture of the Centre with respect to the **National IPR Policy 2016** and strives to work as per CIPAM and MSME have been working towards the propagation of creativity, innovation, industrialization and commercialization of intellectual property. This Bulletin has features like events, columns, news, research information, case review, essays etc. The first Quarterly issue of December 2020 is hereby submitted before the learned scholars, policy makers, entrepreneurs, MSME, Businessman, administrators, agriculturists and all the concerned stake holders.

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THE PURSUIT FOR GI TAG FOR GUCHHI MUSHROOM HEATS UP AS NGO FILES APPLICATION

An application for Geographical indication (GI) tag for Morel Mushroom (locally known as Guchhi Mushroom) was filed at the GI Registry by Jammu based NGO Border World Foundation assisted by the Director of Agriculture of J&K. The squashy edible fungus that grows in J&K's Doda district is India's costliest variety of mushroom and retails over 20,000 rupees/kg, it is used in gourmet dishes of high-end restaurants and also in pulao (a rice dish) served during occasions like marriages. The mushroom is an heirloom crop and has great nutritional value serving as a rich source of protein, Vitamin B and carbohydrates. The NGO states that the GI protection to the crop will go a long way in getting better market opportunities, adequate branding and providing additional commercial value to it. The GI recognition could also prove beneficial to the local farmers of this mushroom by ensuring better prices for their produce and consequentially helping improve the overall socio-economic conditions of the region. The government has also advocated the NGO's cause by endorsing it as a step which will empower the local farmer community.



INDIA AND USA PLEDGE FOR COOPERATION IN INTELLECTUAL PROPERTY RIGHTS



India and United states of America have signed a memorandum of understanding (MOU) on 2nd December to enhance cooperation in the field of intellectual property. This is a significant step which will facilitate India's prospects of becoming a major global intellectual property contributor and further help boost the spirit of innovation and technological

advancement in the nation and across the global. The MoU is aimed at mutually sharing the best practises, experiences and knowledge on Intellectual Property through public participations and encouraging cooperation among universities, research and development organisations and small and medium sized enterprises operating in both the nations. This will serve the purpose of concrete action for realizing the objectives set out in National IPR Policy 2016. This cooperation will help in nurturing and safeguarding traditional knowledge and also preparing a common database for better utilisation of the traditional knowledge and methods of innovation. This MoU will bring numerous valuable opportunities for both countries to learn from each other and progress ahead in the domain of intellectual property.

CHINA WORKING FOR AN AIRTIGHT STRINGENT PUNISHMENT MECHANISM FOR IPR INFRINGEMENTS

China passed Amendment XI to amend its criminal punishment rules to strictly punish for IPR infringements from March 2021. The maximum penal term for copyrights and trademark infringements has been increased from seven to ten years. Convicted criminals who wilfully indulge in sales of goods which bear counterfeit trademark shall be liable for punishment of a term ranging from 3 to 10 years. Those who commit copyrights infringements or infringements of other rights related to copyrights for serving their commercial benefit shall also be liable for a punishment term ranging from 3 to 10 years, these rules shall apply in cases where the loss due to the infringement is huge or in other especially serious circumstances. This amendment sets an example for strict enforcement of laws relating to IPR protection and further will prove pathbreaking in terms of initiating a series of dedicated IPR protection amendments in the Asia region where counterfeiting, passing off and piracy remain serious concerns hampering investment and growth of innovation.

1ST LANDMARK INDO-EUROPEAN DIALOGUE HELD TO ENHANCE COOPERATION IN IPR

India and European Union successfully held the first dialogue for facilitating cooperation in the field of intellectual property, it was co-chaired by Sh. Ravinder, Joint Secretary of Department of industry and internal trade and Mr Carlo Pettinato, Head of Unit Investment & Intellectual Property (EU). This dialogue will prove beneficial for working towards achieving the objectives of National IPR Policy 2016. The important points of deliberation included plant varieties, farmer rights and other challenges that have emerged due to the Covid-19 pandemic. Furthermore the importance of agricultural practices as contributors to the Indian Economy was also highlighted and discussions over improving the mutual IP protection for agricultural products took place. The discussions concluded with joint commitment towards closer collaboration and endorsing IPR protection for mutual benefit of both the economies.

“THE NEED TO PROTECT INDIAN GI GOODS IN OVERSEAS MARKET”

*Aditya Pratap Singh, 2nd Year, Chanakya National Law University

The Romanian IP Office recently accepted a trademark application by Fabryki Mebli Forte SA, a Polish furniture company. This application was filed for recognizing the mark “KASHMIR”, applied with respect to the furniture trade sector, in which Fabryki Mebil has been already using it for its trade transactions across nearly 45 countries globally including Europe. This grant of trademark by OSIM should be critically reflected upon by the expert fraternity as it raises certain pertinent questions. Firstly, it is a standard rule of law that geographical names are barred from being directly monopolized by a company or individual as trademarks, the only exception to this rule is that it can be proven that the name which is being claimed has no association with the goods of that company or individual.

Secondly, marks which specify the quality or geographical origin cannot be registered as trademarks. ‘KASHMIR’ along with being a prominent geographical name is also associated with a variety of crafts of wood, wool, silk and metal originating from the region of Kashmir, thereby ruling out the mark in contention.

Another aspect needs to be analyzed while trying to understand the different ramifications of this decision, there is a 200-plus-year-old famed, carved walnut wooden furniture from Kashmir which has already been registered as a Geographical Indication (GI) for “Kashmir Walnut Wood Carving” in the name of Tahafuz, a registered society on the Indian Register of GIs. Geographical Indications are a type of intellectual property which indicate specific set of characteristics dealing with the quality or reputation of a particular good which is essentially attributable to a particular geographical region. In this case, granting the trademark

“KASHMIR” to the polish company is a violation of intellectual property safeguards relating to other products of Kashmir origin. This trademark misappropriation of an Indian GI is just one of the many attempts made by foreign companies to take credit for Indian products.

These misappropriations have become increasingly common in the domain of handicraft products, to address this issue India may opt for a twofold approach. Firstly, it must deal with the concern for their protection in Europe, which is among the most prominent markets for Indian handicrafts and secondly it shall strengthen the adequacy of Indian GI laws to protect these names at both domestic and international levels.

This loophole regarding handicraft products has emerged because while the European Union (EU) has dedicated laws safeguarding GIs for wines, spirits, foodstuffs and agricultural products, they currently don’t have any such specific law to protect non-agricultural goods. Handicrafts fall under the category of non-agricultural goods and therefore are not eligible for protection under European GI Laws. Discussions in this regard have been ongoing at the European Union since 2014 but they have not reached upon any definite conclusion yet, India needs to keep this reform of granting protection to non-agricultural goods on high priority in its list of agenda while discussing trade with European Countries both on multi-lateral or bilateral levels.

“CAN A ‘SPORTS MOVE’ COME WITHIN THE AMBIT OF IPR”

*Ayushi Rai, 3rd Year, MIT WPU School of Law

“Dhoni finishes off in style. A magnificent strike into the crowd! India lifts the World Cup after 28 years!” screamed Ravi Shastri on air.

It was that “helicopter shot” of Mahendra Singh Dhoni that eventually led to fairy-tale ending of the 2011 world cup. This shot has been so famous and is so hard to pull off for anyone that now whenever we hear about it or see an image of that shot, all we imagine is the face of MS Dhoni. It is his hard work and determination that this shot has come into existence. So, don’t you think that MS Dhoni has the right to copyright this helicopter shot in his name?

Today, we can find traces of Intellectual Property Law in almost all sports, be it cricket, football, athletics or any other sport. There is a long unending debate on whether these sports move would come under IPR or not. From Ali Shuffle to Nadal Forehand to Helicopter shot the question remains unanswered.

If we allow these signature moves to be able to come under IPR, it would be a reward to the athletes for their hard work and creativity that they have put in to built that technique as IPR mainly exists to protect one’s idea, labour and skill. It could alter the life of these athletes/sportsman.

Sports industry has become a multi-billion dollar industry but a person has to struggle a lot to eventually be included in that industry and not all sports gain that kind of popularity. One of the best examples is ‘Hockey’, ironically the national sport of India which is not at all famous in our own country and players sometimes are forced to quit it because of the reasons such as under-funding received and

there is no monetary gain for them. If exclusivity is provided for these signature moves, it could provide monetary gains as well as increase in interest of people towards that sport.

This economic advantage will eventually lead to increase in competition as we have seen in sports marketing where a specific player’s signature move is shown to attract audience and this marketing only increased the performance of those players who were not a part of these marketing contracts.

On the contrary, if we provide exclusivity to these signature moves to come within IPR, then we are creating obstacles for the new players who are trying to get into this field. On the other hand, there are so many games happening everyday and it is impossible to keep a watch on every game that whether the same move have been used or not and the trademark/patent/copyright holder cannot sit and watch every game and so, they will have to keep an official in each game to monitor the same which would need an enormous amount of funding which is not justifiable as that funding could be used better somewhere else.

Hegel’s conception of property and personality on the other hand indicates that while creating a move an athlete/sportsman is putting in the efforts and the creativity of his own and the result is nothing but is simply the extension of himself in that technique. So, if these signature moves are signature moves are to be protected under IPR, it is the need of the hour to improvise the current IPR law so as to suit every aspect of the sports world.

PROTECTING TRADITIONAL CULTURAL EXPRESSION A “BUMPY RIDE AHEAD”

*Saumitra Sharma, Research Scholar, Dr. Ram Manohar Lohiya National Law University, Lucknow.

Next time when you hear a fantastic song on YouTube, which is a fusion of a Rajasthani folk song with modern techno beats, having millions of views therein, give it a quick thought, Does that folk singer representing his community's folk tale in that song has been benefitted adequately? Maybe not. In general usage, it is called 'expression of the folklore', which is now renamed as 'Traditional Cultural Expressions' or TCEs. Though, there is no uniformly recognized definition of the term, but, they are understood as, the expressions in certain tangible or an intangible form, of their traditional culture by the indigenous communities, which is integral to their social identity and heritage, primarily passed from one generation to the other. The rising interest of rustic goods, art forms, fusion music, pottery, carpets etc. has encouraged the illicit commercial exploitation of these cultural expressions by a non-*bonafide* party and hence, the role of Intellectual Property regime has become important in maintaining the equilibrium.

The debate has reached a point where *sui-generis* protection is claimed for protecting TCEs by one group and the other suggests that existing IP laws can be modified to solve the purpose. However, the decision is based on a few considerations ahead. *First*, the conventional IP system considers that most of the creativity by local communities is a part of 'public domain', which is for everyone to use. Thus, the proposed policy must be founded on a clear understanding of the term public domain and discussions should define the boundaries of it. *Second*, is the issue over the identity of the creators, owners of these cultur-

al expressions.

The debate is hovering around the central theme that, the protection should go to the owners of these expressions, but, the question is who is the 'real' entity in which the protection should vest in, is it the individual or a community? Generally, it is believed that it is collectively held by a community, but in some cases, an individual in a community may also express out of his individual creative. For instance, a family within a community of traditional healers may develop an enhanced medicine based on the traditional method known to a community, thus, who should be the owner of the derivative medicine? To claim ownership by a community over these novel expressions of individual entities is just ?. *Third*, another important issue is the meaning of the terms like 'traditional' and 'culture'. The policy framework has to be made, keeping in view, the meaning of 'culture' especially, as culture can have diverse meanings, also, it has to be decided that, whether, there can be ownership on 'culture' or cultural expressions, and how to decide that, whether expression of a community is a part of their culture, and it is collective or individual. Therefore, it is a pre requisite to look into these issues before the TCEs could go in statute books, and hence, it is not wrong to call this policymaking ride a 'bumpy' one.

“WHO OWNS YOUR PHOTO?”

*Prajnali Mehta, 3rd Year, MIT WPU School of Law

What happens when you post your image taken by someone else on your social media platform without giving the credit to the copyright holder? Who owns the copyright of a photograph? What is copyright?

Well, this is the most happening issue in the show biz. A lot of celebrities like Gigi Hadid, Justin Bieber, Jennifer Lopez, Victoria Beckham, Khloe Kardashian, and many more were sued by paparazzi for the copyright infringement of posting their image on Instagram. These cases are now known as "copyright trolling" within the industry. Why?

First of all, let's understand what exactly is copyright. Copyright protects the expression of an idea; it provides exclusive rights to copy an original work. And copyright in photography means that you own an image you created. It is believed that originality lies in the skill and judgment in selecting the composition and angle of the image, so the original work of the photographer is being protected under copyright law. The law does not see who is in the photo or who is the owner of the camera, it clearly says that the person who takes the photo, who is the creator of the photo owns the photo. The photographer who pushed the button, when the shutter is released, is the copyright holder. In India, under the Copyright Act, 1957, the photographer is the first owner of the photograph (Section 17(b)). However, the majority of cases are from America, and according to the U.S. Copyright Office, the owner of the "work" is generally the photographer and the photographs are protected from the moment of creation by the Federal Copyright Act of 1976.

When it comes to celebrities, they often get in trouble for posting a paparazzi picture of them on an online platform. Most recently when Jus-

tin Bieber shared a picture of himself on Instagram clicked by the photographer, Richard Barbera faced a lawsuit by that photographer. Richard says that he is the owner of the photograph and Justin neither gave the credits nor had permission to share it on his account. Bieber is not the only celebrity facing a lawsuit for posting a picture of himself. In 2017, Khloe Kardashian was sued by Xposure Photographer for posting an image, which was exclusively licensed to the Xposure photos, and Khloe posted it on her Instagram account without their permission and also removed their accreditation. Jennifer Lopez and Gigi Hadid have also faced legal trouble for posting a picture of themselves. The photographer argued that the photo had value and now people are not buying their magazines because they already have seen it on their social media accounts.

As much as we think that laws seem simple and perfect we tend to see some exception creating a loophole and allowing someone to exploit the same. Some years back a wildlife photographer David Slater, convinced a monkey to click a selfie and the selfie was published in 2011 in some places and gradually the photographer started gaining attention and making money because of that selfie. Later PETA an organization for animal welfare said "since, legally one who clicks the shutter has the copyright, so the copyright holder is monkey as he was the one who clicked the button and not the photographer, also the money that the photographer has earned with this photo, does not belong to him." In April 2013 the Court said that animals cannot legally hold copyright just like no other rules can be applied to them. This rule is also applicable to humans. The court also doubted the intention of the PETA. They said that it doesn't seem to

COLUMN

court also doubted the intention of the PETA. They said that it doesn't seem to look like it's helping animals instead it is looking for the organization's profit.

With the development of technology, taking photos and sharing them has become easier than ever. Therefore, there is a need for protecting those photos. It is important to protect their original work because many photographers make a living from selling their work and if someone poached their photos, they would not only infringe the law but also disenfranchise their right to distribute or use their images. While some say that photographers are filing lawsuits against celebrities just to get famous or earn money and some are misusing these copyright laws for their benefit. It is an intriguing argument in copyright law and we are left to interpret laws that were written long before electronic communication was ever imagined.

JUDGMENTS

Astrazeneca Ab & Anr vs Union Of India & Ors.

Shaurya Shukla & Akanksha Dhyani, 2nd Year, Chanakya National Law University

FACTS

The petitioner Astrazenacea which is a pharmaceutical company filed a writ petition to quash paragraph 10 of an impugned order of this hon'ble court. Petitioner got patent for their drug Dapagliflozin which is used for treating diabetes. The Indian patent office granted the patent in the year 2009 and this drug got DGCI (Drugs Controller General of India)'s approval in the year 2015. The contention in the instant case arose when the patent office of India erred in adding Astrazenacea's patent to the patent journal which is a statutory requirement as per section 11A of the Indian Patent act, 1970. Respondents filed a revocation petition under section 64 of the Patents Act before the Intellectual Property Appellate Board (IPAB) against the petitioner's said patent IN 235625. Subsequently, on 15.05.2020 respondent No.3 filed a representation before the Indian Patents Office/respondent No.2 for seeking striking off the petitioner's patent from the Register of Patents. The impugned order directed the patent office to publish the grant within 15 days of this order, which petitioner found is highly arbitrary as it has been using said patent IN 235625 for long now as it has also been published on the website of the Indian patent office and granting a new patent after within 15 days of the order by Indian Patent office will cause heavy losses to the petitioner.

ISSUE

Can the statutory requirement under section 11A of the Indian Patents Act, 1970 which mandates "publication of grant" in the patent journal be overlooked in the instant case?

ARGUMENTS FROM THE SIDE OF PETITIONER

After relying on the order passed by this hon'ble court in the case of Torrent Pharmaceuticals limited vs Union of India, petitioner has vehemently pleaded that representation filed by the respondent no.3 has no statutory basis. It was further pleaded by the petitioner that representation didn't carry any prayer for publication and in absence of a prayer, petitioner didn't get any opportunity to make his submission that a publication is not warranted. It was strongly urged before the hon'ble High Court of Delhi that a publication made 11 years after the grant of the patent will now inundate the patent office with the post-grant opposition to the patent under section 25(2) of Indian Patent Act, 1970 causing grave detriment to the petitioner.

ARGUMENTS FROM THE SIDE OF PETITIONER

The learned counsel appearing from side respondent argued that the remedy available to the petitioner cannot outweigh the statutory responsibility of publication. It was further pleaded that if a granted patent didn't get published in the official journal of patents office, it will be a gross violation of section 145 of patents act, 1970.

JUDGMENTS

HIGHLIGHTS OF THE JUDGMENT

Court after considering all the facts and arguments held that it cannot help noticing that the patent was granted way back on 9.07.2009 and section 43(2) of the Indian Patents Act, 1970 does not specify the time in which the publication must be carried out.

This statutory provision mandates the publication to be done within a reasonable amount of time. Court expressed that the delay in publication has caused grave prejudice to the petitioner and issued a belated direction to now do the publication without any fault of the petitioner. The Court issued notice to the learned counsels appearing from the respondent side as it emphasized that the grant of the patent was put on the website by respondent No.1 in 2011 and in 2015, the drug of the petitioner was launched. Hence, the public was prima facie aware of the grant of the Patent in question.

AUTHOR'S COMMENT

The authors firmly support the decision passed by the Hon'ble high court of Delhi as the patent was granted to the petitioner way back in 2009 and they have been marketing and selling their product based on that patent since 2015 as their product was also approved by DCGI. If a new patent is granted to the petitioner, they will have to bear heavy losses which they incurred in the patent claiming, renewing and marketing process and this will be highly bigoted towards them.

JUDGMENTS

Arudra Engineers Pvt. Ltd. Vs. Pathanjali Ayurved Ltd.

Rajnish Prakash, 2nd Year, Chanakya National Law University

FACTS

During Covid-19 pandemic Pathanjali came up with an Ayurvedic medicine called “CORONIL Tablets”. Initially introduced as a cure for Covid-19, but later clarified as an immunity booster for common cold and fever. Arudra Engineers Ltd (plaintiff) engaged in the business of chemical agent that clean heavy machinery. Two of its cleansing product with registered trademarks were “Coronil - 92 B & Coronil – 213 SPL”. Arudra filed an application of interim injunction before Madras HC praying for an order, restraining the respondent, their promoters, or any associated agents with them from infringing the applicant’s registered trademark having name “Coronil”. The plaintiff had registered their trademark, in the year 1993 and renewed it which has validation till 2027. Arudra claimed “*the trademark Coronil is the representative of its product, brand identity, business reputation and the public identification not only in India rather outside India.*” Hence this trademark is the valuable Intellectual property Right for them. Thus by using the word “Coronil”, Pathanjali has infringed their trademark under sec 29(4) of trademark act, 1999.

ISSUE

1. Whether defendants are infringing the plaintiff’s registered trademark & diluting its distinctiveness?
2. Whether the plaintiff’s trademark has a reputation under Sec 29(4) of trademark act and usage of that trademark by the defendants as Coronil Tablets is without due cause?

ARGUMENTS FROM THE SIDE OF PLAINTIFF

Defendants are violating the plaintiff’s right under Section 29(4) of trademark Act, 1999. The plaintiff submitted that despite the products of the plaintiff and defendants are dissimilar, the registered trademark of the plaintiff is protected under the said act. “The Act, provides protection from infringement of a registered trademark by a person who is not a registered proprietor and uses a mark which is identical or similar to the registered trademark and uses it in relation to goods which are not similar to the one for which the trademark is registered and the *use of the unregistered mark is without due cause and takes unfair advantage of the reputation* of the registered trademark and is detrimental to the *distinctive character* of the registered trademark.”

JUDGMENTS

They submitted how they uniquely created the word 'Coronil' (from Corrosion + Nil) that signifies while cleaning the machinery it corrodes the machine very less and thus the word Coronil is directly connected with the nature of their business due to which they registered the said trademark. Hence the term 'Coronil' is originally coined by the plaintiff.

The plaintiff's clients included industries such as BHEL, NTPC, Reliance Industries Ltd., Indian Oil Corporation etc. and other similar heavy industrial establishments across the world. The plaintiff has high reputation not just in India but outside India as well. The defendants (Pathanjali) initially claimed that the 'Coronil Tablet' is a treatment of Corona disease and later projected it as an immunity booster. If the product of Pathanjali is not related to Corona virus, then why are they insisting to claim the trademark "Coronil". It shows the intention of the defendant, they are trying to *"mislead people into believing that the tablets marketed by the defendants would in fact cure Corona virus which as a fact is not true In this connection the defendants and thus defendant have no due cause to use the trademark Coronil."* Thus the defendants are trying to exploit the pain and suffering of the people in the pandemic. This deliberate action misled the people and violated the public interest which is an essential feature of a trademark as established in ***Colgate-Palmolive(India) Ltd. V. Anchor Health & Beauty Care Private Ltd.***

ARGUMENTS FROM THE SIDE OF DEFENDANT

The defendants propounded that there is no similarity between the Coronil tablet and Coronil chemical products ("Coronil-92 B and Coronil-213 SPL") as former is an immunity booster tablet which is a human consumable product whereas the latter is a kind of chemical cleansing product used to clean heavy machineries in heavy industries. So, due to such differences the consumers can easily distinguish between the two products and will never be confused. The two products have a completely different consumer base hence the possibility of a confusion is minimal. *In Blue Hill Logistics Private Ltd., Vs. Ashok Leyland Limited*, it was established that since both plaintiff and defendants were involved in the same business in which they manufacture luxury buses and i.e, why the claim of word Luxuria by defendant was declined. But in the present matter both the industries operate in a different field so the above precedent will not apply here, as there is no similarity between both products in the present case. Hence there is no bar to register a trademark and continue to operate, when the goods fall under different classes. Thus the claim of the plaintiff with regard to the dilution of its trademark is unsustainable. The defendants referred to ***Astrazeneca UK Limited & Anr. Vs. Orchid Chemical & Pharmaceuticals Ltd.***, which stated that, keeping a name on the ailments, organs and treatment is common and thus the use of 'Coronil' is justified by the defendant. Whereas the plaintiff's trademark is not the mark

JUDGMENTS

“Coronil” separately, rather it is registered with suffixes 92B & 213SPL, and hence the plaintiff cannot claim they have registered the trademark “Coronil”. It is a settled principle that a trademark has to be seen as a whole and not in a selective manner. Another major argument made by the defendant was that it is highly unlikely that a company with a turnover of around 10,000 Cr. with millions of consumers will take undue advantage of company which hardly has a turnover of 10 Cr. Rupees and 31 consumers.

HIGHLIGHTS OF THE JUDGMENT

An owner of a trademark (plaintiff here) which has earned a reputation in India, need not prove that they have suffered losses or that the infringing trademark is misleading for their customers. Once the plaintiff has proved that the trademark in issue is identical or similar to their trademark it is sufficient, and relief would be available even if the products are of a different kind.

The question of ‘well known trademark’ and ‘reputation in India’ can’t be determined by the court as in ***Privy Council in Crawford v. Spooner*** asserted that according to judicial discipline we can’t aid the legislature’s defective phrasing of the act. So judiciary can’t impute a word in the said act and hence ‘reputation in India’ can be interpreted as ‘nothing more, nothing less’. Referring to ***N.S.Krishnamoorthy and Another V. Afru Hearing Aid Centre*** the Hon’ble Court held that since both the plaintiff and the defendant’s trademark had the term “coronil” as the significant portion hence the plaintiff has made a prima facie case of injunction. The continued use of ‘coronil’ by the defendant will infringe the plaintiff’s trademark without due cause, and thus cause substantial damage to the reputation of the mark “Coronil”. The argument that the defendant has a big turn over and plaintiff doesn’t is not acceptable.

The Hon’ble Court having regard to the above facts, circumstances and evidences produced granted interim injunction order restraining defendants from using the trademark and also ordered the defendant to pay a fine of Rs. 10 Lakh.

The above order of injunction is stayed by a division bench of Madras HC which has also allowed Pathanjali to use the label “Coronil”.

INNOVATIONS IN NEWS

DENGUE DAY 1 KIT



Dengue fever is a mosquito-borne tropical disease caused by the dengue virus. The virus is detected by a blood test that checks for signs of dengue fever. Results can take from four days to two weeks. Dengue is undoubtedly one of the biggest health concerns in India. NVBDCP data reveal that over one lakh people were diagnosed and an estimated 172 died from dengue in 2018. One of the major reason for these deaths are late diagnosis.

Dr. Navin Khanna, a Padma Shree Awardee and an expert in mosquito born disease, especially dengue with his team of scientists developed an effective and affordable solution to the problem of Dengue. He developed a kit called “Dengue Day 1 kit” to diagnose dengue within 15 minutes of the test at a cheaper cost as compared to other kits available in the Indian market. The kit helps in finding out whether the virus is in the primary or secondary stage. This helps doctors in treating the patient quickly and also detects all four types of dengue viruses.

With the price of only Rs. 140, this life saving innovation can be used for early detection of Dengue fever.

SUBJEE COOLER



INNOVATIONS IN NEWS

Subjee Cooler, designed by a Thane-based startup RuKart Technologies is a low cost innovation that has helped farmers in lockdown to earn more. As vegetables produced by farmer are perishable, the only way to store these vegetables for a long period of time is with the help of cold storage which are very high in cost. This innovation, Subjee Cooler is a low cost vegetable storing solution provided to farmers by RuKart Technologies. It helps them to store the vegetables for longer period of time thereby increasing their income.

ZERODOR, WIRELESS URINAL



IIT Delhi alumnus, Uttam Banerjee did a tremendous job in innovating a wireless and odourless solution to sanitation. Zerodor, is a water-less and odour-less urinal. Zerodor works on a mechanical system with a valve, which allows the urine to go through and blocks the ammonia present in the urine in the urinal pipe. It can be retrofitted in existing urinals and no chemicals are used, no electricity is required, which makes the kit low-maintenance. All that is to be done is to wash the urinal with running water once a day to keep it clean.

EVENTS

Webinar on Protection of Intellectual Property and MSME

A webinar in collaboration with cell for intellectual property and management (CIPAM), Ministry of Commerce and Industries, Government of India, New Delhi was conducted on 15th January, 2021. The theme of the capacity building programme (webinar) was Intellectual Property Commercialisation and Entrepreneurship. Mr Sourav Dan who is currently working as a Senior Associate with Khaitan & Co. Mumbai was the speaker at the event while it was organised and moderated by Prof. Dr. Subhash C Roy, Dean R & D, Director CIRF in IPHD (CNLU).

Webinar on Intellectual Property Rights for innovative entrepreneurs in MSME

A webinar on Intellectual property rights for innovative entrepreneurs in MSME (micro, small and medium enterprise) was conducted on 11th July, 2020. Dr G.R. Raghvender, Joint Secretary, Department of Justice, Ministry of Law & Justice, New Delhi was the lead speaker at the event. Prof. Dr Subhash C Roy, Dean R&D, Director (CIRF) was the organiser and the moderator of the event while it was coordinated by Mrs Pallavi Shankar, Teacher Associate, CNLU. A webinar on Intellectual property rights for innovative entrepreneurs in MSME (micro, small and medium enterprise) was conducted on 11th July, 2020. Dr G.R. Raghvender, Joint Secretary, Department of Justice, Ministry of Law & Justice, New Delhi was the lead speaker at the event. Prof. Dr Subhash C Roy, Dean R&D, Director (CIRF) was the organiser and the moderator of the event while it was coordinated by Mrs Pallavi Shankar, Teacher Associate, CNLU.

Capacity Building Program on 'Aatmanirbhar Bharat'

Capacity building programme on Aatmanirbhar Bharat (self- dependent India) was conducted from 30th July, 2020 to 1st August 2020. The theme of the programme was Rural Entrepreneurship (MSME) Opportunities in Geographical Indications, Plant Varieties and Farmers Rights, Biodiversity Laws. The prominent speakers at the event included Prof. Dr. M. Kanthababu Director, CIPR Anna University, Chennai, Dr. Nidhi Buch Assistant Professor of Law, GNLU, Ahmadabad, Dr. Topi Basar Associate Professor, NLU, Assam and various other academicians who provided valuable insights related to the theme. The event was organised and moderated by Prof. Dr. Subhash C Roy, Dean R & D, Director CIRF in IPHD (CNLU).

Webinar in collaboration with CIPAM, Ministry of Commerce and Industries (G.O.D)

A webinar in collaboration with cell for intellectual property and management (CIPAM), Ministry of Commerce and Industries, Government of India, New Delhi was conducted on 15th January, 2021. The theme of the capacity building programme (webinar) was Intellectual Property Commercialisation and Entrepreneurship. Mr Sourav Dan who is currently working as a Senior Associate with Khaitan & Co. Mumbai was the speaker at the event while it was organised and moderated by Prof. Dr. Subhash C Roy, Dean R & D, Director CIRF in IPHD (CNLU).

UPCOMING EVENTS



“ONE DAY E- INTERNATIONAL SEMINAR ON EMERGING TRENDS OF INTELLECTUAL PROPERTY RIGHTS ”

Date : 17th April, 2021

ORGANIZER

LAW MANTRA TRUST, RAJIV GANDHI NATIONAL UNIVERSITY OF LAW, PUNJAB, CHANAKYA NATIONAL LAW UNIVERSITY (CNLU), PATNA , MAHARASHTRA NATIONAL LAW UNIVERSITY, NAGPUR

OBJECTIVE

To provide a platform for stake holder like organizations working in international and national level, legislatures, civil societies, researchers, practitioners, academicians, activists and policy makers to deliberate and discuss on what is required to build strategies and to address the constraints in inclusive practices towards betterment of the society.

The Organizing Committee welcomes original papers, relating to, but not limited to the following topics:

1. Current emerging trends in Intellectual Property Regime.
2. Intellectual Property challenges in the field of pharmaceuticals.
3. Intellectual Property and Sustainable Development.
4. Protection of Geographical Indication and Traditional Knowledge.
5. Procedural & Registration Aspect of Trade Marks
6. Interface between IPR & Competition Law
7. Geographical Indication & Protection of Traditional Knowledge
8. Abuse of Dominant Position
9. Copyright & Fair Use
10. Intellectual Property in Trade and Development

UPCOMING EVENTS

11. Intellectual Property and Sustainable Development
12. Law relating to Copyright and the Entertainment Industry
13. Geographical Indication and Protection of Traditional Knowledge
14. Intellectual Property challenges in the field of agriculture and pharmaceuticals
15. Challenges of Enforcement of Protection of Copyright Laws in the Digital Era
16. Challenges of Protection of Artistic Creativity in the Context of Media Convergence
17. The interface between Designs and Copyright Laws

Note: These Themes are not exhaustive; Authors are open to work on any topic related to above-mentioned theme

PROCEDURE FOR ABSTRACT SUBMISSION

- Abstract (of about 250 words) should be sent as an attachment in a word file. Abstracts will be peer reviewed before they are accepted.
- The following information, in the given format, should be send along with the Abstract:
- Name of the Participant, Official Designation/Institution Details, Address and Email id, Title of Abstract
- Submit your abstract to seminarnlus@gmail.com

REGISTRATION FEE

- Student- Rs. 500
- Faculty/Professional/Research Scholar/Other– Rs. 700

IMPORTANT DATES

- Submission of Abstract 25th March
- Confirmation of Abstract Selection 27th March
- Registration 09th April
- Submission of Proposed Paper 14th April, 2020
- Seminar Date 17th April
- Submission of Final Paper 2nd June, 2021
- Publication of Selected Paper By March, 2022

PRESS RELEASE

The MSME Development Institute Patna organized a workshop in the conference hall of Bihar Vidhyapeeth on Intellectual Property Rights and MSME. It was an awareness program among the startups, MSME and the Entrepreneurs organized on 1st March, 2021 in collaboration with A.I.C (Atal Incubation Centre). In this workshop the speakers were namely Shree D.K Singh (Former Director, MSME, Patna, A.I.C Chairman, Bihar Vidyapeeth Patna), Professor SC Roy (Dean R&D, CNLU, Patna) Prof. Rakesh Kumar Singh (Aryabhata knowledge University, Patna) and Shree Pramod Karna of A.I.C. Patna.

The Chanakya National Law University was ecosystem partner in this webinar. The speakers agreed on one point that there is lack of awareness in IPR and its application towards MSME and Entrepreneurship. In this workshop more than 50 participants were the entrepreneurs offline and around 50+ were online.



LINK TO NATIONAL IPR POLICY 2016- https://dipp.gov.in/sites/default/files/National_IPR_Policy_English.pdf

Research innovations/ Novelties by research group with Nano science center of AKU affiliation and Nalanda University, Rajgir



Research Team – Dr. Rakesh Kumar Singh, Dr. Abhay Kr Aman, Prabhakar Sharma et. al

Title of research- Purification of water through activated Alumina materials, published in SCI and Scopus Journal, *Desalination and Water Treatment*, www.deswater.com



Summary of research

- Removal of fluoride is a desalination technology in which fluoride ions from aqueous solution are adsorbed on suitable adsorbent surfaces. This work aims to determine equilibrium sorption of fluoride on surface modified activated nano-alumina in aqueous solution.
- Results indicated that adsorption occurred rapidly in beginning, and equilibrium was reached on surface modified, i.e., grinded activated alumina. At equilibrium, adsorption capacity was about 28 mg g⁻¹ (i.e., mg of fluoride per g of alumina) in case of activated alumina, whereas it was noted as 39 mg g⁻¹ for grinded activated alumina for pH of 3.0 and fixed fluoride concentration of 100 mgL⁻¹ in aqueous solution.
- Overall, the present research reveals that the grinded activated alumina can be a prospective adsorbent for treatment of fluoride contaminated water.

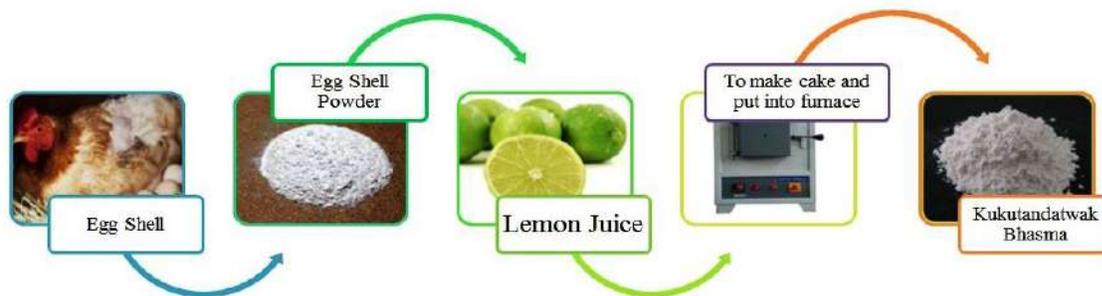
This research is completed in collaboration with Nalanda University, Rajgir

**Research innovations/novelty of faculty/scholar with Nano science center of AKU
affiliation- Highlights (Academic Year: 2019-20)**

Research Paper published in Journal Materials Today Proceeding- Elsevier (Scopus indexed), DOI- <https://doi.org/10.1016/j.matpr.2020.09.072>

Title of the paper- Calcium oxide (CaO) Nanomaterial (KukutandatwakBhasma) from Egg shell: Green Synthesis, Physical Properties and Antimicrobial behaviour.

Research Team- Sweta Sinha, Abhay Kr. Aman, Rakesh Kr. Singh, Nishant Kr, et al.



- CaO nanomaterials from natural waste egg cell as kukutandatwak bhasma was successfully prepared using the eco-friendly green approach. XRD and Electron microscopy analysis determined its average size below 100 nm.
- **This supports the requirement of multiple calcinations or heat treatment as recommended in classical Ayurveda text proposed by Indian forefather.** Thus, continuous heat treatment imparts specific behaviour that might be responsible for the therapic activity as a special class of medicine as a natural substitute.
- The antimicrobial evaluation revealed that KukutandatwakBhasma as nanomedicine is more effectual antifungal than antibacterial. The clear zone of inhibition for fungus *BeauveriaBassiana*, *Pacelomyceslilacinus* *TricodermaHarzianum* showed the significant antifungal property of KB Nanoparticles against soil-born fungus. It may be suggested that kukutandatwak Bhasma can be used as a promising antifungal agent in sericulture, mushroom cultivation, in treatment of pathogens and as a hand wash agent as a natural substitute. Green approach of preparing CaO nanomaterials from waste egg shell and their possible applications in health and medicine may open a new window for developemnt of society. Magnetic and luminescence behavior obtained of this CaO nanomaterials from natural egg shell may also be useful as magneto-optical devices and related field.

Corresponding author details- Dr. Rakesh Kr Singh (Post-Doc, Ph. D, M. Sc)

Academic(i/c)/ Head/ Prof. Incharge-Establishment (from 1st April 2014)

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

Scientific activities citation-www.drrakeshsingh.com

Google scholar profile- <https://scholar.google.com/citations?user=gOZNJ-oAAAAJ&hl=en>

Research gate profile- https://www.researchgate.net/profile/Rakesh_Singh44

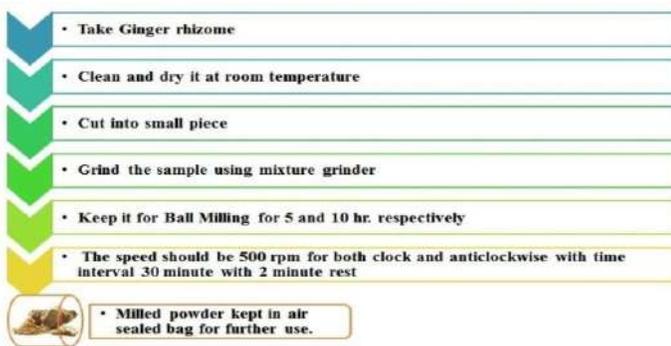
. Research novelty of faculty/scholar with Nano science center of AKU affiliation

Highlights

Paper published in Journal Materials Today Proceeding-An International Journal, Elsevier (Scopus indexed), DOI-<https://doi.org/10.1016/j.matpr.2020.09.028>

Title of the research -Effect of superfine grinding on Structural, Morphological and Antioxidant properties of Ginger (*Zingiberofficinale*) Nano powder for health and Biomedical applications.

Research group - Archana, Dr. Abhay Kr. Aman, Dr. Rakesh Kr. Singh, Mr. Nishant Kr



- The superfine ginger food nanopowder powder was prepared successfully using high energy ball milling equipment. Scanning electron microscopy measurement indicates that pressure grinding for different time duration changes the surface morphology, which can have a considerable impact on the physical-chemical behaviour of prepared ginger powder for various industrial applications.
- Antioxidant behavior depends on superfine properties of ginger powder. A well-researched and thorough analysis through surface science of such natural food materials using advanced technology can lead to the industrial and scientific development of various medicinal uses for mankind. Therefore, the present research opens a new window for the progress of surface science of superfine ginger powder for the pharmaceutical, **health, and medicine sector** as functional food nanomaterials.

Corresponding author details- Dr. Rakesh Kr Singh (Post-Doc, Ph. D, M. Sc)

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Aryabhatta Centre for Nanoscience & Nanotechnology, Aryabhatta Knowledge University Patna,

Scientific activities citation-www.drrakeshsingh.com

Google scholar profile- <https://scholar.google.com/citations?user=gOZNJ-oAAAAJ&hl=en>

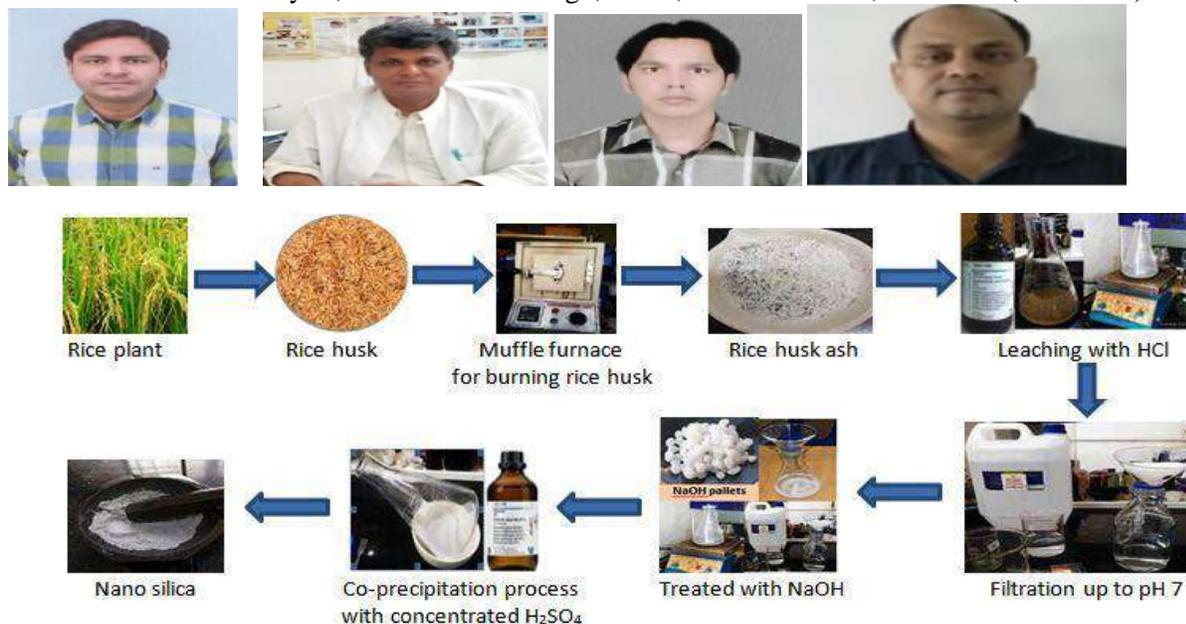
Research gate profile- https://www.researchgate.net/profile/Rakesh_Singh44

**Research novelty by faculty/scholar with Nanoscience center of AKU and IIT Patna
affiliation- Highlights (Academic Year: 2019-20)**

**Paper published in Journal of Materials Science and Engineering: B(SCI Journal), DOI-
<https://doi.org/10.1016/j.mseb.2020.114871>**

**Title of research -Synthesis and Physical properties of amorphous Nanosilica from
Rice husk(agriculture waste) and its composite materials.**

Research Team- Atul Jyoti, Dr. Rakesh Kr Singh, N. Kr, Dr. A. K Aman, Dr. M.Kar(IIT Patna) et al.



Conversion of waste into wealth and Knowledge

- Small size amorphous nano silica (SiO₂) was prepared by using cost-effective and environment-friendly method. FTIR spectra shows the absorption peaks indicating the existence of Si-O-Si (silanol) functional group. The photoluminescence spectrum reveals the broad excitation of radiation in the visible region.
- The magnetic hysteresis loops of silica-ferrite composite reveal that these materials can be used as polymer magnet
- Nano-silica as an engineering material has numerous applications in various area of science and technology including, Electronics, biomedical science and optoelectronics devices etc. due to its physical characteristics. Hence, Measurement of physical characteristics of nano silica from rice husk (Agriculture waste) and its magnetic polymer composite may suggest scientific communities for various industrial applications.

Corresponding author details- Dr. Rakesh Kr Singh (Post-Doc, Ph. D, M. Sc)

Academic(i/c)/ Head/ Prof. Incharge-Establishment (from 1st April 2014)

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

Scientific activities citation-www.drrakeshsingh.com

Google scholar profile- <https://scholar.google.com/citations?user=gOZNJ-oAAAAJ&hl=en>

Research gate profile- https://www.researchgate.net/profile/Rakesh_Singh44

Research publication by faculty/scholar with Nanoscience center of AKU and NIT Patna affiliation- Highlights

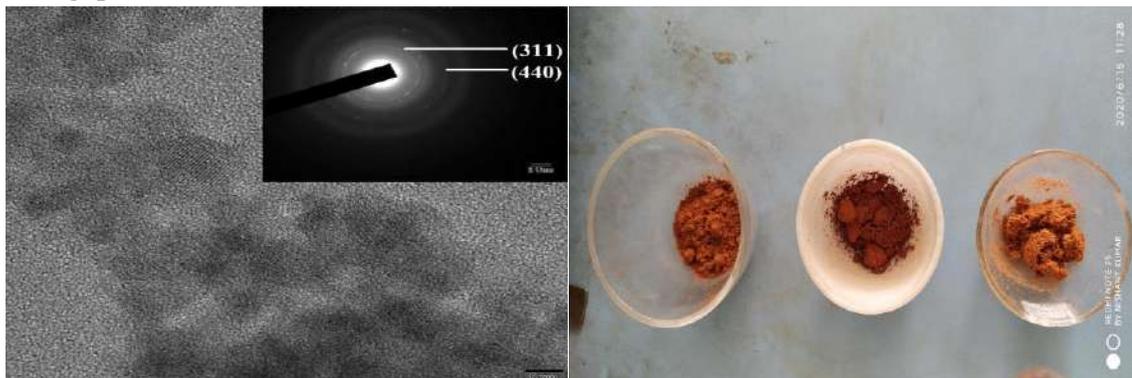
Research title- Gd-doped soft Mn–Zn nanoferrites: synthesis, microstructural, magnetic and dielectric characterizations.

Journal- Journal of Materials Science: Materials in Electronics (2020) 31:3529–3538.

Research Team - Kamar Tanbir, Dr. Rakesh Kumar Singh, Dr. Samart Mukhar Jee(NIT Patna) et al.



- Composition-dependent Gd-doped soft Mn–Zn ferrite magnetic nanomaterials of range of 3 ± 1 nm spinel ferrites were prepared using chemical co-precipitation method.
- The observed superparamagnetic behavior of all the samples at room temperature is due to the non-magnetic nature of Gd ions and tiny size of the particles. **Such kind of nanoparticles with proper biofriendly coating is suitable for targeted drug delivery and hyperthermia cancer applications.**
- **The synthesized nanoferrites were excellent absorber near red and infrared region of EM spectrum at room temperature as observed in Tauc plots. These nanoparticles can be suitable candidate to block infrared rays.**
- All the samples exhibited good dielectric behavior at low frequencies. The effective contributions of grain boundaries in overall impedance were verified by the single semi-circle arc in the Nyquist plots. We broadly conclude that the sample with 15% Gd doping has shown the most advantageous properties such as RT superparamagnetism and large band gap.



High resolution Transmission Electron microscope image

This work is Doctoral Research work of Md. Tanbir, under the supervision of Dr. Rakesh kr Singh