



Office of the Principal  
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3.3.1: Research papers published by the teachers in the Journals notified on UGC care list during 2020.

1	Asomor Pragatisheel Somaj Sahityar Bikashot Bharatiyo Gana natya Sangha	Dr. Pangkhi Hazarika	Assamese	SATSARI	2020	2319-8893	<a href="https://www.ilovephd.com/ugc-care-list-of-journals-arts-and-humanities-2022/">https://www.ilovephd.com/ugc-care-list-of-journals-arts-and-humanities-2022/</a>	print only	UGC care list
2	Identification of Human-Leopard Conflicts, Conservation Threats and Habitat Suitability in the Urban Landscapes of Guwahati City, Assam, India using Field-based and Geospatial Techniques	K.K. Bharali, K. Bordoloi, K. Singha, D. Sahariah, D.K.Sarma, Y.L.Singh	Geography	International Journal of Advanced Science and Technology	2020	2005-4238	<a href="http://sersec.org/journals/index.php/IJAST">http://sersec.org/journals/index.php/IJAST</a>	<a href="https://www.academia.edu/43325779/Identification_of_Human_Leopard_Conflicts_Conervation_Threats_and_Habitat_Suitability_in_the_Urban_Landscapes_of_Guwahati_City_Assam_India_using_Field_based_and_Geospatial_Techniques">https://www.academia.edu/43325779/Identification_of_Human_Leopard_Conflicts_Conervation_Threats_and_Habitat_Suitability_in_the_Urban_Landscapes_of_Guwahati_City_Assam_India_using_Field_based_and_Geospatial_Techniques</a>	Scopus


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3	Crystalline rubrene <i>via</i> a novel process and realization of a pyro-phototronic device with a rubrene-based film	<b>Deepshikha Gogoi,</b> Amreen A. Hussain, Sweety Biswasi & Arup R. Pal	Physics	Journal of Materials Chemistry C	2020	2050-7534	<a href="https://pubs.rsc.org/en/journals/journalissues/tc#!recentarticles&amp;adv">https://pubs.rsc.org/en/journals/journalissues/tc#!recentarticles&amp;adv</a>	<a href="https://pubs.rsc.org/en/content/articlelanding/2020/tc/d0tc00857e/unauth#!divAbstract">https://pubs.rsc.org/en/content/articlelanding/2020/tc/d0tc00857e/unauth#!divAbstract</a>	Web of Science
4	Leveraging the orthogonality of Zernike modes for robust free-space optical communication	Dr. Santanu Konwar and B R Boruah	Physics	Communication Physics (Nature publishing group)	2020	2399-3650 (online)	<a href="https://www.nature.com/commsphys/">https://www.nature.com/commsphys/</a>	<a href="https://www.nature.com/articles/s42005-020-00468-1">https://www.nature.com/articles/s42005-020-00468-1</a>	Web of Science
5	Low Temperature Chemical Synthesis of ZnS, Mn doped ZnS Nanosized Particles: Their Structural, Morphological and Photophysical Properties	Dr. Bijoy Barman and K. C. Sarma	Physics	Solid State Sciences (ELSEVIER)	2020	1293-2558	<a href="https://www.sciencedirect.com/journal/solid-state-sciences">https://www.sciencedirect.com/journal/solid-state-sciences</a>	<a href="https://www.sciencedirect.com/science/article/abs/pii/S1293255820312760">https://www.sciencedirect.com/science/article/abs/pii/S1293255820312760</a>	Web of Science
6	Observable gravitational waves in minimal scotogenic model	Devabrat Mahanta	Physics	Journal of Cosmology and Astroparticle Physics	2020	1475-7516	<a href="https://iopscience.iop.org/journal/1475-7516">https://iopscience.iop.org/journal/1475-7516</a>	<a href="https://iopscience.iop.org/article/10.1088/1475-7516/2020/08/046">https://iopscience.iop.org/article/10.1088/1475-7516/2020/08/046</a>	Web of Science


  
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7	TeV scale leptogenesis with dark matter in non-standard cosmology	Devabrat Mahanta	Physics	Journal of Cosmology and Astroparticle Physics	2020	1475-7516	<a href="https://iopscience.iop.org/journal/1475-7516">https://iopscience.iop.org/journal/1475-7516</a>	<a href="https://iopscience.iop.org/article/10.1088/1475-7516/2020/04/032">https://iopscience.iop.org/article/10.1088/1475-7516/2020/04/032</a>	Web of Science
8	New Congruences modulo 2, 4 and 8 for the number of tagged parts over the partitions with designated summands (52:253--274), 2020.	Nayandee p Deka Baruah and Mandeep Kaur	Mathematics	The Ramanujan Journal.	2020	15729303	<a href="https://link.springer.com/article/10.1007/s11139-018-0112-x">https://link.springer.com/article/10.1007/s11139-018-0112-x</a>	<a href="https://link.springer.com/article/10.1007/s11139-018-0112-x">https://link.springer.com/article/10.1007/s11139-018-0112-x</a>	Web of Science
9	Some results on vanishing coefficients in infinite product expansions	Nayandee p Deka Baruah and Mandeep Kaur	Mathematics	The Ramanujan Journal	2020	15729303	<a href="https://link.springer.com/article/10.1007/s11139-019-00172-x">https://link.springer.com/article/10.1007/s11139-019-00172-x</a>	<a href="https://link.springer.com/article/10.1007/s11139-019-00172-x">https://link.springer.com/article/10.1007/s11139-019-00172-x</a>	Scopus
10	A NOTE ON SOME RECENT RESULTS OF DA SILVA AND SELLERS ON CONGRUENCES FOR K-REGULAR PARTITIONS	Nayandee p Deka Baruah and Mandeep Kaur	Mathematics	Integers	2020	15531732	<a href="http://math.colgate.edu/~integers/u74/u74.pdf">http://math.colgate.edu/~integers/u74/u74.pdf</a>	<a href="https://link.springer.com/article/10.1007/s00574-019-00187-4">https://link.springer.com/article/10.1007/s00574-019-00187-4</a>	Web of Science


  
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	WITH DESIGNATED SUMMANDS								
11	Post Colonialism in Indo-Middle East Countries with a Brief Reference to Arabic Literature	Amzad Hussain	Arabic	International Journal of Management(IJM)	2020	ISSN Print:0976-6502 and ISSN Online:0976-6510	<a href="https://ijm.mercglobal.org/">https://ijm.mercglobal.org/</a>	<a href="https://iaeme.com/Home/article_id/IJM_11_07_167">https://iaeme.com/Home/article_id/IJM_11_07_167</a>	UGC carelist

  
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ISSN: 2319-8893

ষষ্ঠদশ বছর, প্রথম সংখ্যা, আগস্ট ২০২০

# সাতসর্বা

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## প্ৰবন্ধ নিবন্ধ

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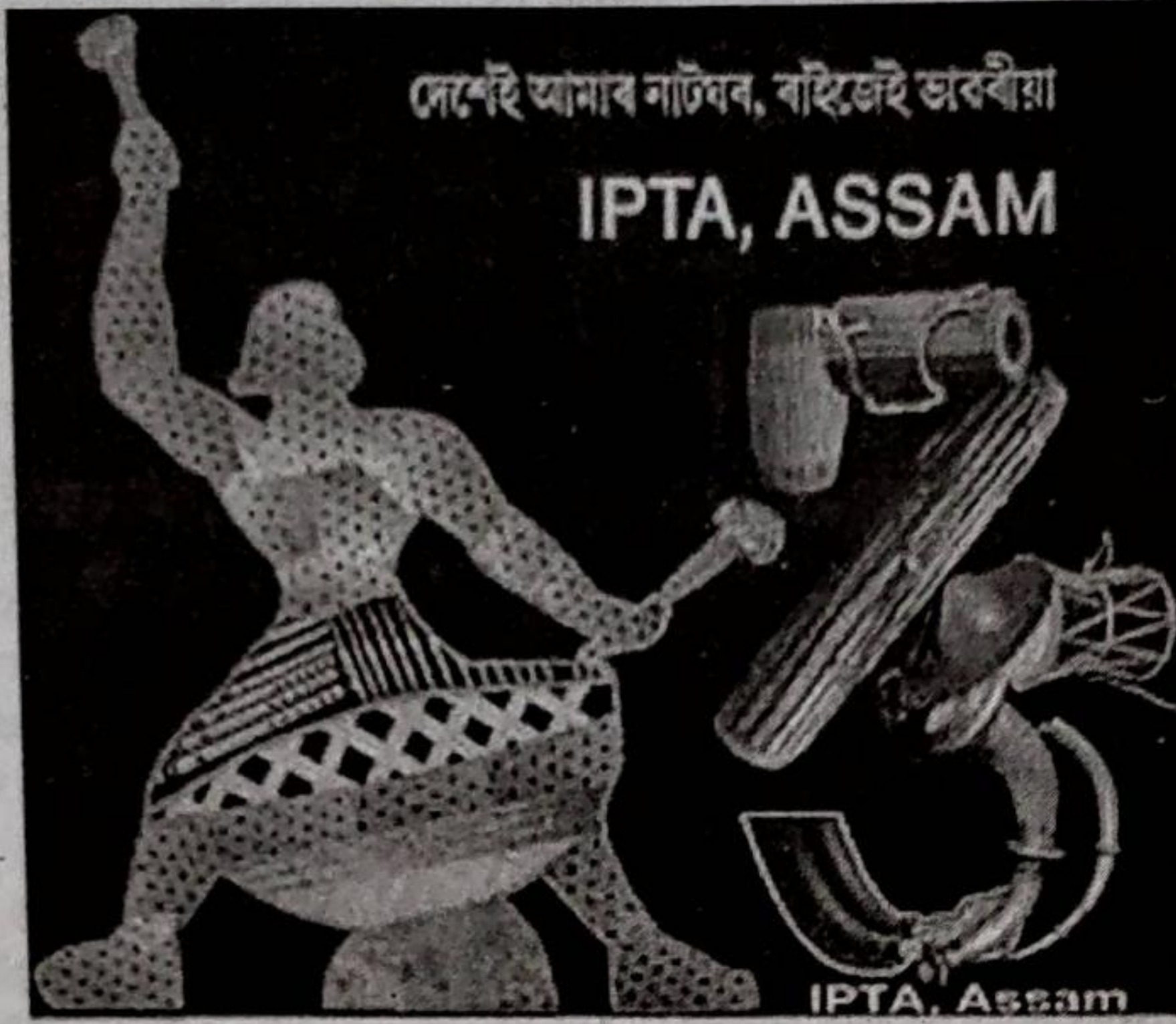


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জিহ্ম গীতাৰ্থ • চমকনি • ৮৫







# অসমৰ প্ৰগতিশীল সমাজ-সাহিত্যৰ বিকাশত 'ভাৰতীয় গণনাট্য সংঘ'

৬° পঞ্চী হাজৰিকা

'গণনাট্য সংঘ' হৈছে সৰ্বভাৰতীয় পৰ্যায়ৰ এটি অনুষ্ঠান। 'ভাৰতীয় গণনাট্য সংঘ'ৰ আঁত ধৰিয়েই অসমৰ গণনাট্য সংঘৰ বিচাৰ কৰিব লাগিব। ভাৰতবৰ্ষৰ সাহিত্যত প্ৰগতিশীল ধাৰা এটা গঢ়ি উঠিছিল 'ভাৰতীয় গণনাট্য সংঘ'ৰ নিচিনা সাংগঠনিক অনুষ্ঠানৰ জৰিয়তে। ১৯২০-৩০ চনৰ সময়ছোৱাতে গণনাট্য আন্দোলন অনুষ্ঠানটি গঢ় লৈ উঠিছিল। ভাৰতবৰ্ষত প্ৰগতিশীল লেখক সংঘৰ উদ্যোগতে গণনাট্য সংঘৰ জন্ম হয়। গণনাট্য সংঘৰ সৰ্বভাৰতীয় পৰ্যায়ৰ প্ৰথমখন শাখা গঠিত হৈছিল বাংগালোৰত, ১৯৪১ চনত। ১৯৪৩ চনত বোম্বাইত ২৫ মে'ৰ দিনা ভাৰতীয় গণনাট্য সংঘৰ প্ৰথম সৰ্বভাৰতীয় সংগঠনটো গঠন হয়।

সমগ্ৰ ভাৰতবৰ্ষতে গঠন হোৱা দিল্লী, আগ্ৰা, লক্ষ্ণৌ, কাণপুৰ, এলাহাবাদ, আলিগড়, মধ্যপ্ৰদেশ, মহাৰাষ্ট্ৰ, বোম্বে আদি গণনাট্য সংঘৰ শাখাসমূহে সাংস্কৃতিক ক্ষেত্ৰখনক আগবঢ়াই লৈ যোৱাত যথেষ্ট আগভাগ লৈছিল। অসমতো গণনাট্য সংঘই প্ৰগতিশীল সাহিত্য-সংস্কৃতিৰ বিকাশত গুৰুত্বপূৰ্ণ ভূমিকা পালন কৰিছিল। ১৯৪৭ চনত শিলচৰত অসম শাখাৰ গণনাট্য সংঘৰ প্ৰথমখন অধিবেশন অনুষ্ঠিত হৈছিল। এই সংঘটো গঢ়াৰ ক্ষেত্ৰত আগভাগ লোৱা ব্যক্তিসকল আছিল— মণি ভট্টাচাৰ্য, কাৰ্তিক বিশ্বাস, সত্যকাম দত্ত, হেমাংগ বিশ্বাস, নিৰঞ্জন সেন, পানু পাল, উষা দত্ত, অনুকপা বিশ্বাস, ভূপতি চক্ৰবৰ্তী, চিন্দু সেন, উবাৰঞ্জন ভট্টাচাৰ্য, অনিল ৰায়চৌধুৰী, অচিন্ত্য ভট্টাচাৰ্য, মুকুট ভট্টাচাৰ্য, বিজু চৌধুৰী, নীলু সেনগুপ্ত, অনন্ত দেব, মিলন সেন, আশীষ দাস, শীলা দাস, সোমেশ হোমচৌধুৰী, শীলা হোমচৌধুৰী, বীণা চন্দ, কোকিল সিংহ, আশীষ দত্ত, বাণী দেব, কণিকা বিশ্বাস, গৌৰী দত্তৰায়, শিপ্রা বিশ্বাস, ঝৰ্ণা দাস, বেবা দত্ত, ইন্দু সেন, শুভাংসু ৰায়চৌধুৰী, ফণী দাসগুপ্ত, নান্টু বেনাৰ্জী, বণেন দত্তৰায়, অমিয় দাস, মানবেন্দ্ৰ চৌধুৰী, শংকৰ এন্দ, শংকৰ বিশ্বাস, আনন্দময়ী ভট্টাচাৰ্য, বেণীমাধৱ চৌধুৰী, ৰামেন্দ্ৰ দেশমুখ,





## Social Media- a Positive or a Negative impact? ; A Study of the Psychological impact on Indians during the times of COVID - 19 Pandemic Lockdown

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### Abstract

*Social Media : a boon or ban? This research paper attempts to study the psychological impact of social media on its users. This is a exploratory paper with qualitative investigation. Thematic and sentiment analysis is done on the primary data collected. The primary data is collected through interviews and observation. The secondary data is collected from various books and journals. Data is collected from the social media platforms through Facebook and twitter mining. The research has divided the sentiments into negative and positive. It is found that social media has a negative psychological impact on majority of the users.*

*Keywords: Social Media, Psychological impact, Lockdown, COVID 19, Sentiment analysis*

### Introduction

The 2019-20 COVID - 19 Pandemic, the ongoing pandemic caused by the Coronavirus disease has become a world emergency. It has taken a toll on many lives around the world. This pandemic is a global health crisis which has an impact on every sector in the world economy. The spike in the rate of the contagion and the ways of transmission has threatened the social nature of human beings given the fact that the only way to combat the virus is through social distancing. In India also there is a sharp increase in the number of positive cases. On 24 March, the Government of India under Prime Minister Narendra Modi ordered a nationwide lockdown for 21 days, limiting movement of the entire 1.3 billion population of India as a preventive measure against the 2020 coronavirus pandemic in India. It was ordered after a 14-hour voluntary public curfew on 22 March, followed by enforcement of a series of regulations in the country's COVID-19 affected regions. The lockdown was placed when the number of confirmed positive coronavirus cases in India was approximately 500. On 14 April, Prime minister Narendra Modi extended the nationwide lockdown till 3 May, with a conditional relaxation after 20 April for the regions where the spread has been contained.<sup>1</sup>

The decision of lockdown was tough on everybody, especially the ones staying away from their families. The biggest brunt is faced by the migrant workers and the daily wage earners. As their income source stopped, it has become difficult to meet their ends. The lockdown has left tens of millions of migrant workers unemployed. They're often from rural areas but live most of the year in India's megacities, serving as day laborers, construction workers or domestic help. Most are thought to have no savings. Many lived in factory dormitories, now shut, and got stranded when the government halted bus and train service last week. They're vulnerable to starvation and

<sup>1</sup> (n.d.). 2020 coronavirus lockdown in India - Wikipedia. Retrieved April 21, 2020, from [https://en.wikipedia.org/wiki/2020\\_coronavirus\\_lockdown\\_in\\_India](https://en.wikipedia.org/wiki/2020_coronavirus_lockdown_in_India)



## **Identification of Human-Leopard Conflicts, Conservation Threats and Habitat Suitability in the Urban Landscapes of Guwahati City, Assam, India using Field-based and Geospatial Techniques**

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### **Abstract**

*Increasing human population put significant impact on the wild-life habitats all over the globe. Guwahati, the largest city of North-Eastern part of India experiences the human-leopard conflict from last few decades. Studies advocate that once this region was a suitable abode for many animal species, especially for the leopards. But the growing urban built-up progressively shrinks the suitable habitation site for this species that leading to the frequent conflicts between man and leopard within the city region. Rapid decrease of leopard population and increasing incidences of encounters are the major concern for the sustainable conservation of the species. In this study, an effort has been made to evaluate the habitat suitability of leopards in Guwahati city region by using composite score method. Four parameters are considered to perform the spatial analysis such as leopard conflict locations collected using camera traps, pug marks/scat, and*





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## Crystalline rubrene *via* a novel process and realization of a pyro-phototronic device with a rubrene-based film †



[Deepshikha Gogoi](#)<sup>a</sup>, [Amreen A. Hussain](#), <sup>‡</sup><sup>a</sup>, [Sweety Biswasi](#)<sup>a</sup> and [Arup R. Pal](#) <sup>\*a</sup>

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E-mail: [arpal@iasst.gov.in](mailto:arpal@iasst.gov.in)

### Abstract

In this report, a recently invented novel pyro-phototronic effect is explored in an optoelectronic device containing a fully organic thin film. A unique plasma-based process is implemented for the synthesis of rubrene crystal directly



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# Low temperature chemical synthesis of ZnS, Mn doped ZnS nanosized particles: Their structural, morphological and photophysical properties

Bijoy Barman <sup>a</sup>  Kanak Chandra Sarma <sup>b</sup>



<sup>a</sup> Department of Physics, Abhayapuri College, Assam, 783384, India

<sup>b</sup> Department of Instrumentation and USIC, Gauhati University, Assam, 781014, India

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## Observable gravitational waves in minimal scotogenic model

Debasish Borah<sup>1</sup>, Arnab Dasgupta<sup>2</sup>, Kohei Fujikura<sup>3</sup>, Sin Kyu Kang<sup>4</sup> and Devabrat Mahanta<sup>1</sup>

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### Abstract

We scrutinise the widely studied minimal scotogenic model of dark matter (DM) and radiative neutrino mass from the requirement of a strong first order electroweak phase transition (EWPT) and observable gravitational waves at future planned space based experiments. The scalar DM scenario is similar to inert scalar doublet extension of standard model where a strong first order EWPT favours a portion of the low mass regime of DM which is disfavoured by the latest direct detection bounds. In the fermion

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Devabrat Mahanta<sup>1</sup> and Debasish Borah<sup>1</sup>

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Published: 21 March 2019

# New congruence tagged parts over summands

Nayandeep Deka Baruah  & **Mandeep Kaur**

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### Abstract

Recently, Hirschhorn proved that, if

$$\sum_{n=0}^{\infty} a_n q^n := (-q, -q^4; q^5)_{\infty} (q, q^9; q^{10})_{\infty}^3$$

and

$$\sum_{n=0}^{\infty} b_n q^n := (-q^2, -q^3; q^5)_{\infty} (q^3, q^7; q^{10})_{\infty}^3,$$

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**A NOTE ON SOME RECENT RESULTS OF DA SILVA AND  
SELLERS ON CONGRUENCES FOR  $k$ -REGULAR PARTITIONS  
WITH DESIGNATED SUMMANDS**

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*Received: 1/16/20, Accepted: 9/3/20, Published: 9/11/20*

**Abstract**

Da Silva and Sellers proved the existence of several families containing infinitely many congruences for  $PD_k(n)$  for various values of  $k$ , where  $PD_k(n)$  denotes the  $k$ -regular partitions with designated summands. They also conjectured a few more congruences. In this paper, we prove their conjectural congruences, and also present some new families of congruences modulo 8 for  $PD_{144k}(144n + t)$ , for  $t \in \{84, 132\}$  and  $PD_{288k}(288n + 180)$ .

**1. Introduction**

Andrews, Lewis and Lovejoy [1] introduced partitions with designated summands, which are constructed by taking ordinary partitions and tagging exactly one of each part size. A partition is said to be  $k$ -regular is none of its parts is divisible by  $k$ . Let  $PD_k(n)$  denote the number of  $k$ -regular partitions of  $n$  with designated summands. The generating function of  $PD_k(n)$  is given by [1, Corollary 3]

$$\prod_{n=1}^{\infty} (1 - x^{kn})^{-1} \prod_{n=1}^{\infty} (1 - x^n)^{-1}$$



# POST COLONIALISM IN INDO-MIDDLE EAST COUNTRIES WITH A BRIEF REFERENCE TO ARABIC LITERATURE

Amzad Hussain<sup>1</sup>

<sup>1</sup> Assistant Professor, Abhayapuri College, Assam, India.

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## Abstract

Post Colonialism is an intellectual way of thinking. The concept of post-colonialism was developed after the colonial countries had been independent. It has increasingly become an object of scientific study since 1950. Post colonialism deals with conflicts of identity and cultural belonging. Colonial powers gained control over so many Afro-Asiatic countries and a destroyed main part of the latter's native tradition and culture. It often led to conflicts when countries became independent and suddenly faced the challenge of developing self-confidence and a sense of nationalism. In European imperialists conquered a number of third world countries right from India and Middle East countries. The term 'Middle East' stands for over a dozen of countries situated in Africa and Asia. These countries were colonialized mainly by the European powers in different times under different political circumstances. Of course, all the countries won their freedom and gain independence after the World War II. In this context, Language is an intellectual medium by which post-colonial communication and reflection take place. A large number of writers and poets of different nations had been influenced with colonialism, whose feelings and reactions were expressed in their poems and writings. A lot of Indian books written in English can be attached to the era of post-colonialism. In this regard, it is quite relevant to mention here a few of the Indian authors who are associated with the post-colonial literature. Similarly, a good number of poets and writers of the middle East countries have dealt with the themes related to the post- colonial issues. They made significant contributions by writing in particular style, spirit and manner against the long running effect of colonialism, which have been able to establish a new perspective in Arabic literature. In this regard, it will necessitate throwing a light on the heroes of Arabic literature who deal with the post-colonial issues. It is an approach to post-colonialism and its trend in the Indo-Middle East literary perspective.

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