

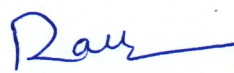


Internal Quality Assurance Cell
(NAAC Accredited "A" Grade University)
Himachal Pradesh University, Shimla-05
Mobile- 98760-71296 (Director) 508 (Office)
Email- directoriqachpushimla@gmail.com

Dr. Ramesh Chand Thakur
(Director)

3.7.1 Number of collaborative activities with other institutions/ research establishment/ industry for research and academic development of faculty and students during the year
3.7.1.1: Total number of Collaborative activities with other institutions/ research establishment/industry for research and academic development of faculty and students during the year

Academic Year	Number of Collaborative Activities
2020-21	5
Total	5


(Director IQAC)
Director
IQAC
(Internal Quality Assurance Cell)
HPU Shimla-05

SRM UNIVERSITY
DIRECTORATE OF RESEARCH AND VIRTUAL EDUCATION
S.R.M.Nagar, Kattankulathur-603 203, Kancheepuram District
Phone : +91 44 27417142 Tel/Fax : +91 44 27456702
Email id: dean.research@srmuniv.ac.in.

Dr. S. V. Kashmir Raja
Dean (Research)

Date: 03.11.2016

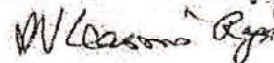
File: SRMU/Ph. D/Guide/352/2016

Dear Dr.Bhavani Singh

Sub: Ph.D.Program -Recognition as a Co - Research Supervisor-reg.

I am by direction to inform you that the Vice-Chancellor of SRM University, Kattankulathur has approved your good self as a recognized Co -Supervisor in the Department of Hindi, to guide the research scholars of SRM University, leading to Ph.D. degree in the Faculty of Science and Humanities, SRM University, Kattankulathur.

Yours faithfully,



(S.V.KASMIR RAJA)

To
Dr.Bhavani singh
Research Officer – Cum
Assistant Professor
Institute of Integrated Himalayan Studies
Himachal Pradesh University
Summerhill, Shimla - 171005

Copy to:

The Director, Science and Humanities, SRM University
Dr.S.Preethi, Head, Department of Hindi
The Controller of Examinations

No: Visual Arts/HPU/2021/- 1103
Himachal Pradesh University
(NAAC Accredited 'A' Grade University)
Department of Visual Arts

Date 22 Jan, 2021

To

The Director
Department of Transport
Government of Himachal Pradesh
Shimla

Sir

As per the email received on dated January 21st, 2021 from the department of Transport, It will be our pleasure to be a part of this event of 'Sadak Suraksha - Jiwan Raksha'. We do appreciate your thought of an Art workshop regarding the awareness programme. We are also willing to arrange such an art workshop for the event. The paintings will be the asset for your department and all copy rights will be yours. You can arrange road safety exhibitions with these paintings in future and also can have calendar and dairy on the bases of these art works.

The tentative budget has been enclosed as-

Workshop 20 Artist

INAUGURATION

1150/- : Chief guest (Himachali cap +shawl + bouquet)

23250/-: Artist (Cap + certificate + shawl)

4000/-: Tea snacks x 2 times

Lunch 6250/- (25 x 250 per plate)

Artist honorarium

2,00,000/- (20 artist x 10,000)

Art materials 50,000/-

(Canvas 2x2 , acrylic Colour set , brush set + 2 bowl)

Banner and invitations

2000/-

Food and hotel x 10 artist

45,000/- . (4500 per Artist)

Other expenses 5000/-

(Candles + transportation)

Total 3,36,650/- (Three Lac thirty six thousand six hundred fifty rupees only)

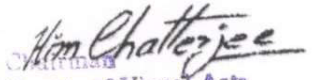
The payment will be done directly to the Department or HP university.

Bank Detail-

Chairman
Department of Visual Arts
Himachal Pradesh University
Shimla-5
Account No- 46110100272
IFSC- HPSC0000461

We would be looking forward to hearing from you.

Regards


Chairman
Deptt. of Visual Arts
H.P. University Shimla
Professor Him Chatterjee
Chairman
Department of visual arts
Himachal Pradesh University



2021.02.25 11:18



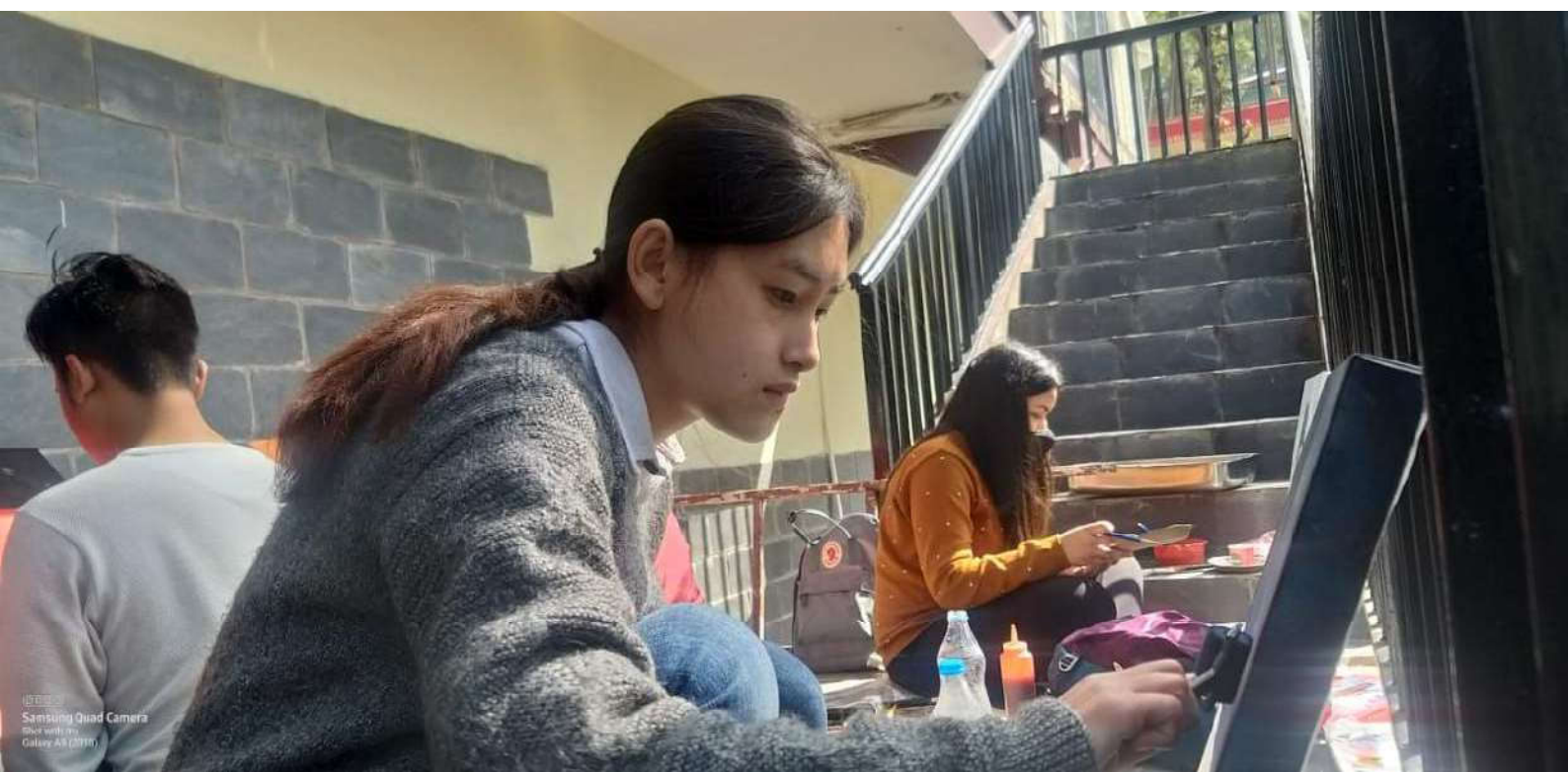
Samsung Quad Camera

Shot with my
Galaxy A9 (2018)















©©©©
Samsung Quad Camera
Shot with my
Galaxy A9 (2018)



Samsung Quad Camera

Shot with my
Galaxy A9 (2018)



Samsung Quad Camera
Shot with my
Galaxy A9 (2018)

3.7.1 Number of collaborative activities with other institutions/ research establishment/industry for research and academic development of faculty and students during the year

Index

S. No.	Collaborative Activity	Page
1	Research Collaborations with NIT Hamirpur (H.P.) for Al nano-thermite	2
2	Research Collaborations with UGC-DAE consortium at Indore (M.P.) for crystallization kinetics in nano chelcogenides	3
3	Research Collaborations with High Pressure and Synchrotron Radiation Physics Division, Bhabha Atomic Research Centre, Mumbai, for study of semicrystalline polymers	4



ScienceDirect

Physica B: Condensed Matter

Volume 610, 1 June 2021, 412803

Study of energy release in $\text{Fe}_2\text{O}_3/\text{Al}$ nano-thermite with graphene as an additional fuel

Priya Thakur^a, Vimal Sharma^b , Nagesh Thakur^a

^a Department of Physics, Himachal Pradesh University, Shimla, India

^b Department of Physics & Photonics Science, National Institute of Technology, Hamirpur, India

Received 18 September 2020, Revised 7 December 2020, Accepted 27 December 2020, Available online 31 December 2020, Version of Record 27 March 2021.



Show less 

 Outline |  Share  Cite

<https://doi.org/10.1016/j.physb.2020.412803>

[Get rights and content](#)



PAPER

OPEN ACCESS

RECEIVED

24 June 2020

REVISED

24 October 2020

ACCEPTED FOR PUBLICATION

9 November 2020

PUBLISHED

18 November 2020

Original content from this work may be used under the terms of the Creative Commons Attribution 4.0 licence.

Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.



On the crystallization kinetics of multicomponent nano-chalcogenide $\text{Se}_{79-x}\text{Te}_{15}\text{In}_6\text{Pb}_x$ ($x = 0, 1, 2, 4, 6, 8$ and 10) alloys

Anjali¹, Balbir Singh Patial^{2,3} , Suresh Bhardwaj⁴, A M Awasthi⁴ and Nagesh Thakur¹

¹ Department of Physics, H. P. University, Summer Hill Shimla, Himachal Pradesh-171 005, India

² State Project Directorate, Rashtriya Uchchatar Shiksha Abhiyan, Directorate of Higher Education, Himachal Pradesh, Shimla-171 001, India

³ Department of Physics, Govt. College Sonni, District Shimla, Himachal Pradesh -171 301, India

⁴ UGC-DAE Consortium for Scientific Research, University Campus, Khandwa Road, Indore, Madhya Pradesh-452 001, India

E-mail: bopatial@gmail.com and h.s.patial@gov.in

Keywords: Nano-chalcogenide, DSC, Activation energy, Non-isothermal, Thermal stability

Abstract

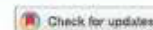
Nanotechnology continuously rises due to its potential applications. To control nano-materials design and microstructure, it is very essential to understand nucleation and crystalline growth in these materials. In this research contribution, crystallization kinetics and thermal behaviour of nano-crystalline $\text{Se}_{79-x}\text{Te}_{15}\text{In}_6\text{Pb}_x$ ($x = 0, 1, 2, 4, 6, 8$ and 10 at. wt%) chalcogenide alloys is analyzed through differential scanning calorimetry (DSC) process under non-isothermal conditions at four different heating rates; 5, 10, 15 and $20^\circ\text{C min}^{-1}$. The examined Se-Te-In-Pb nano-chalcogenide system is prepared through melt-quenching process. Characteristic temperatures namely glass transition temperature (T_g), onset crystallization temperature (T_o), peak temperature of crystallization (T_p) and melting temperature (T_m) show dependence on heating rate and composition. The various kinetic parameters such as activation energy of glass transition (E_g), activation energy of crystallization (E_c), reduced glass transition temperature (T_{rg}), Hruby number (K_H), thermal stability parameters (S and H') and fragility index (F_i) are analyzed for investigated Se-Te-In-Pb nano-crystalline system. Different empirical approaches are applied to determine the apparent glass transition activation energy (E_g) and crystallization activation energy (E_c).

1. Introduction

The advancement in characterization and visualization techniques opens up a new window in materials science for control synthesis of materials at nano-level. The nanostructure configurations are progressively attracting huge attention not only for basic research point of view but for their unique properties; electronic, optical, large surface-to-volume ratio etc as compared to bulk systems [1, 2]. Nanostructure synthesis has been analyzed for several materials and interest has been developed in nano-crystalline Pb-chalcogenide semiconductors because of size tuneable properties occurring due to quantum confinement [3, 4]. They have potential applications as solar conversion devices, photo-sensors, and detectors of infrared radiation, photo resistors, photo detectors, nonlinear optical devices, thermo-electric devices, lasers, infrared emitters and solar control coatings [5–7].

A lot of research is focused on fundamental issues of these metal-containing nano-crystalline materials due to their unusual properties, including chemical durability, anomalous order of band-gaps, large dielectric constant, high carrier mobility, low phonon energy, extended IR transparency, large photo sensitivity, special nonlinear optical properties and high thermal stability [2, 8–14]. The multi-component chalcogenide nano-crystals proposed excessive assistance of having tuneable electronic, optical, defect and structural properties which facilitate photovoltaic characteristics [12]. All these fascinating, attractive and unique properties of Pb additive nano-structured semiconductors have prompted scientists to explore fundamental properties of these systems and there is a lot of scope for studying these materials in nano-range.

ARTICLE



A study of thickness dependent microstructure of poly (3-hexylthiophene) thin films using grazing incidence x-ray diffraction

Manoj Kumar^a, Srihari Velaga^b, and Amarjeet Singh^{a*}

^aDepartment of Physics, Himachal Pradesh University, Shimla, India; ^bHigh Pressure and Synchrotron Radiation Physics Division, Bhabha Atomic Research Centre, Mumbai, India

ABSTRACT

Thin films of poly (3-hexylthiophene), abbreviated as P3HT, are widely used systems of semiconducting polymer for applications in organic electronic devices. We studied the microstructure of spin-coated thin films of P3HT using grazing incidence x-ray diffraction (GID) by combining high-resolution vertical scan with 2D intensity maps obtained using area detector. Microstructure of the films was quantitatively analyzed in terms of relative crystalline density, texture and coherence length. The structure of the films was relaxed by annealing at 110°C. The relaxed microstructure shows strong thickness dependence. Thick film (61 nm) was highly crystalline and textured. For thin film (32 nm), relative crystalline density was very weak but the coherence length of crystallites was larger and the orientation of crystallites was even more strongly textured. For thick film, the strong increase of crystalline density takes place through fresh nucleation and reorientation of crystallites already present in the films. For thin films, the substrate interaction induced very strong alignment of lamellar crystallites through degeneration of off-oriented crystallites and increased lamellar crystalline coherence. The drastic change of microstructure within a small thickness range is an important aspect to be considered while preparing thin film devices.

ARTICLE HISTORY

Received 28 February 2021
Accepted 24 March 2021

KEYWORDS

Poly (3-hexylthiophene);
semi-crystalline polymers;
thin films; microstructure;
grazing incidence x-ray
diffraction

Introduction

Poly (3-hexylthiophene), abbreviated as P3HT, is a semi-crystalline conjugated polymer which possesses semiconducting properties. It is one of the widely studied polymers for applications in organic electronic devices such as field effect transistors (FETs) and donor material in organic solar cells, photodiodes^[1, 2–6] Recently, thin films of P3HT blended with [6,6]-phenyl C₆₁-butyric acid methyl ester (PCBM) have also shown electric field-dependent switchable dielectric properties and negative differential resistance (NDR) behavior.^[7,8] The microstructure of P3HT film must be suitably modified as per the need of a given application. Diversity of its applications mainly arises from the richness of the microstructure due to its semi-crystalline property. It essentially means that a fraction of the polymeric volume is crystalline and the rest is amorphous. In such systems the density of crystalline phase or degree of crystallization (DOC), molecular packing, orientation and size of crystallites strongly determines current transport in the system. Conventional crystallographic orientations of P3HT crystallites are depicted by a sketch in Figure 1. Preferential alignment of crystallites in a given direction is responsible for anisotropic current transport. Charge transfer is preferred along the

backbone chain <001> and π - π stacking <010> direction; whereas alkyl side-chains offer strong resistance for the charge transfer along <100> edge-on direction. The anisotropy of electrical conduction, regio-regularity (RR) of P3HT, degree of crystallization with different orientations is responsible for the diversity of nano-scale morphology.^[9,10]

The studies on the manipulation of molecular packing and crystalline density have been carried out [11–13, 14] Pristine P3HT films coated on dielectric substrate forms the configuration of typical FET system where charge carriers flow in the plane of film near the dielectric interface from source to drain.^[15–19] The lamellar stacking of P3HT chains perpendicular (edge-on orientation) to the surface ensures that the polymer backbone chain and π - π stacking direction run parallel to the substrate surface which aids in charge transport along the interface plane. Previous studies of P3HT films establish that the preferred orientation of edge-on axis is perpendicular to the substrate. As a result, the microstructure of films is textured.^[20–24] At present the studies of microstructure of semi-crystalline polymers are one of the fascinating areas of research. In past the studies on the morphology of P3HT thin films had been carried out from the point of view of organic

Index

Sr.No	Activities	Page number
1	Financial and Digital Awareness Workshop	2
2	Women Empowerment Workshop with Mahindra & Mahindra Ltd.	3-4
3	Visaka Scheme	5-6

HIMACHAL PRADESH UNIVERSITY
(NAAC Accredited 'A' Grade University)
CENTRE FOR EVENING STUDIES
The Mall, Shimla-171001

No.3-2/18/HPUCES

Dated:20.09.2019

Financial and Digital Awareness Workshop

A detailed report on the workshop conducted by the State Bank of India, Scandal Point, The Mall Shimla on 'FINANCIAL AND DIGITAL AWARENESS' on 20th September, 2019.

Mr. K.S. Thakur	Regional Manager	SBI Regional Office
Mr. Raman Sudhir	Chief Manager	SBI Scandal Point
Mr. Shivam Arora	Technical Officer	S
Mr. Rohit Bhatia	Assistant	SBI

The students were made aware about YONO the digital platform of State Bank of India. The aim of launching the app is to make the customers experience safe and secure banking alongwith shopping and investment. There is a unique feature in this app 1-C, which enables withdrawl of cash from ATM without using Debit Card/ATM Card. The students of the department were offered the exclusive facility to open their account between 3 to 5 o' clock at Scandal Point Branch. The officials also educated the students about how to pay fees online, deposits and other rules of holding accounts, online banking, etc. The workshop was co-ordinated by Prof. Arti Pandit Dhawan. She said that technical literacy plays a big role as it is considered an important adjunct for the promotion of financial inclusion and stability.

Prof. Meenakshi F. Paul addressed the students and encouraged them to embrace digital financial platforms as it is the mandate of the Govt. of India that citizens should move towards using digital transaction instead of cash for convenience and decreasing corruption.

She thanked the SBI Team for educating the students on financial terminology.



Principal
HPU Department of Evening Studies
The Mall, Shimla-1

Principal

HIMACHAL PRADESH UNIVERSITY
(NAAC Accredited 'A' Grade University)
CENTRE FOR EVENING STUDIES
The Mall, Shimla-171001

No.3-2/18/HPUCES -

Dated: 06-11-2019

Women Empowerment Workshop with Mahindra & Mahindra Ltd.

Today in our department a workshop was organised under women empowerment section by mahindra and Mahindra, only for female students. Firstly, principal Prof. Minakshi F. Paul introduced the officials and addressed the students regarding the workshop. Then the convener of the program Dr. Shobha Misra invited Mr. Subash, General Manager Services, on the stage. With the help of a presentation Mr Subhash explained that Mahindra and Mahindra Automotive Limited make sincere efforts for women's employment and for this they work on unique concept of "pink collar", breaking boundaries. This concept believes in women's capabilities in every field even in some stereotyped fields. They are planning to convert its Maliana Service Centre to vehicle maintenance workshop where only women employee will be appointed. They offer attractive salary with technical training, safety and security measures for women.

Then Mr Mohit Sharma (Manager, Customer Care) and other officials like Mr Chetan Joshi and Lalit Sharma also addressed and shared their views to students and answered their queries sufficiently. About 32 to 35 girl students actively participated in this event which was very enthusiastic and full of knowledge. At last Dr Shobha Misra presented a vote of thanks on behalf of the department to the officials of Mahindra and Mahindra group.

Workshop Report:

Date: November 6, 2019

Time: 5:00 - 6:30 PM

Venue: Library hall, HPUDES

By: Dr. Shobha Misra



Principal
HPU Department of Evening Studies
The Mall, Shimla-1

Principal

Career Counselling for Girls by Mahindra & Mahindra



Prane
Principal
HPU Department of Evening Studies
The Mall, Shimla-1

PRINCIPAL

ELTAI Shimla

ELTAI Shimla chapter came into existence in 2018 with a vision to promote English as a language in education and other fields. The English Language Teachers' Association of India (ELTAI) is the largest network of Teachers of English in the country. It is an Associate of IATEFL, UK and was founded on August 7, 1969 by the Late Padamshri S. Natarajan, a noted educationist. ELTAI Shimla is committed to provide a knowledge sharing forum to the teachers and students of English in Himachal Pradesh.

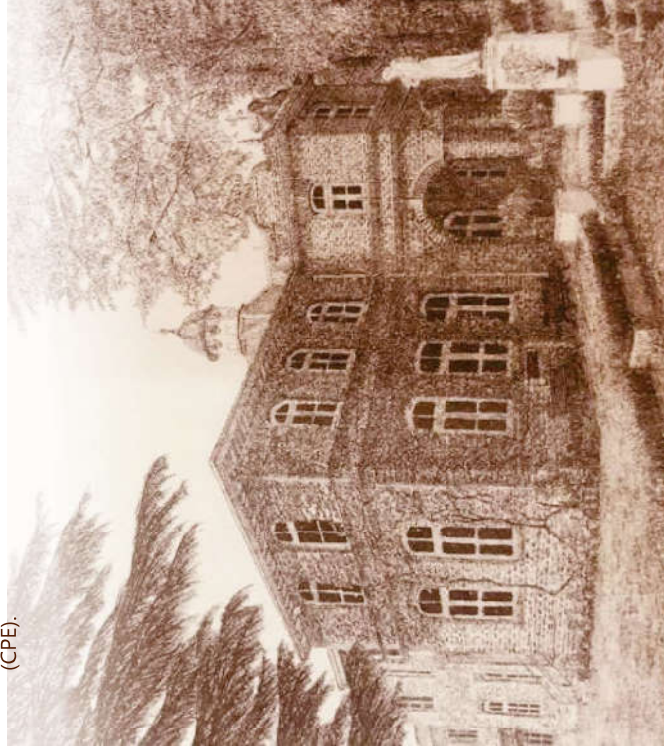
Department of Evening Studies

Himachal Pradesh University, Shimla

Department of Evening Studies, Himachal Pradesh University, the first and only institution of its kind, was established as Panjab University Evening College in 1962. Since then it has contributed significantly to the progress of the State by providing education to its workforce and entrepreneurs; thereby, helping them advance their careers.

St. Bede's College, Shimla

St. Bede's College, Shimla epitomizes an old world charm going back over 100 years to its founding by the Order of Jesus & Mary in 1904. It is a NAAC re-accredited A+ (2016) institution that has been granted heritage status by the UGC. It is also recognized as a college with Potential for Excellence (CPE).



ELTAI Central Body

President	: Dr. Sanjay Arora (Jaipur)
Vice-President	: Dr. Shravan Kumar (Greater Noida)
Vice-President	: Dr. Reddy Sekhar (Bengaluru)
Secretary	: Dr. K. Elango
Jt. Secretary	: Dr. Ramakrishna Bhise (Mumbai)
Jt. Secretary	: Mr. R. H. Prakash (Raichur)
Treasurer	: Mr. R. Kesavulu
Coordinator	: Dr. J. Mangayarkarasi

ELTAI Shimla

Patron	: Prof. Roshan Lal Sharma
President	: Dr. Anita Sharma
Vice-Presidents	: Prof. Meenakshi F. Paul Dr. Kamayani Bisht
Secretary	: Dr. Suneela Sharma
Jt. Secretaries	: Dr. Reva Gupta Ms. Ritu Sharma
Treasurer	: Ms. Deepika Rai
Executive Members	: Dr. Sandhya Sharma Ms. Upma Sharma Dr. Poonam Kimta

CONFERENCE ADVISORS

Prof. V. P. Sharma
Prof. Pankaj K. Singh
Prof. Girija Sharma
Prof. K. C. Sharma
Prof. Usha Bande
Prof. Praveen Kumar
Prof. Rekha Sharma

Venue:

From Shimla Railway Station: 8 kms
From ISBT Shimla: 9 kms
Day temperature in December will be 6-8 degrees Celsius

Thermals and woollens are recommended



NATIONAL CONFERENCE

Culture, Language & Literature

December 4-5, 2019

at

St. Bede's College
Shimla

Organised by

- ELTAI@I – Shimla
- Department of English, St. Bede's College, Shimla
- Department of Evening Studies, H.P. University, Shimla

Phone: 98160-30711, 94180-13297

89880-44333, 94181-87201

Website : www.stbedescollege.in

Email: eltaiatbedes@gmail.com

Concept Note

Language, literature and culture are inextricably intertwined. While the elemental function of language is communication, its most eloquent and palpable manifestation is literature, which nurtures and sustains culture. The English language has witnessed exponential expansion in the twentieth century, and there are no visible signs of contraction or even exhaustion setting in. In prestige, influence, spread, applicability, efficacy and acceptability, the English language is without precedence in history, not essentially for its aesthetic allure or some intrinsic sophistication but for its application in situations as diverse as intelligibility in international communication to life-transforming financial implications, especially for those in the outer and the expanding circles. The expansion of English into new territories has made it susceptible to change, but its linguistic effulgence has not diminished despite the fact that it has been interspersed with innumerable culture-specific words and expressions; on the contrary it has gone from strength to strength by being receptive to the linguistic and cultural resources which many languages and cultures have poured into its ever-expanding reservoir. It is an interesting coincidence that the United Nations has declared 2019 as the International Year of Indigenous Languages, with a view to protect and promote these languages, which are dying at an alarming rate. These languages are repositories of traditional knowledge and cultural values; their continuance is significant for cultural diversity, sustainable development, reconciliation and peace building. In the global village, cultural barriers of communication can be overcome through bilingualism and multilingualism, which are a prerequisite for peaceful co-existence, mutual respect and trust. This calls for sensitivity, reasonableness and nuanced understanding in dealing with ideological standpoints, hegemonies and multiplicities of meanings.

Call for Papers on the Following Sub-themes:

- Teaching English in a multilingual/multicultural classroom
- Using technology in the teaching of English
- Developing intercultural communicative competence through world literatures
- Developing cultural sensitivity through the teaching of language and literature
- Teaching language through literature
- Teaching language and literature innovatively
- English as the global lingua franca and the survival of indigenous languages
- English in the marketplace
- The politics of language
- Language and culture in international relations
- Any other topic related to the main theme

Chief Patron:

Prof. Sikander Kumar
Vice Chancellor
Himachal Pradesh University, Shimla

Patrons:

Prof. Meenakshi F. Paul
Prof. Roshan Lal Sharma
Prof. Nandini Pathania

Convenors:

Dr. Anita Sharma
Ms. Anuja Sharma
Dr. Arti Pandit Dhawan

Co-convenors:

Dr. Suneela Sharma
Dr. Kamayani Bisht
Dr. Sanjeev Kumar Bragta

Important dates:

- Last Date for Submission of Abstract:
November 10, 2019
(250 Words, 12pt. Times New Roman, Double Space)
email: eltaiatbedes@gmail.com
- Intimation of Approval of Abstract:
November 15, 2019
- Full Paper Submission: **November 25, 2019**
- Conference Dates: **December 4-5, 2019**

It is mandatory to attend the conference on both the days.

Registration Fee:

■ Faculty	2000/-
■ ELTAI Members	1500/-
■ Research Scholars	1000/-
■ Participants	1000/-
■ UG/PG Students	200/-

Name & Designation

Name & Address of Institution/Organisation

E-Mail

Mobile No

Title of Paper

Online Payment to be made to:

Name: **Deepika Rai**
Name of the bank: **HDFC**
Account No.: **50100229473220**
IFSC: **HDFC00004184**

Please note that the registration fee does not cover accommodation. It covers the Conference kit (only for faculty and paper presenters), tea and lunch on both days.

Recommended Hotels

for outstation participants:

HOTEL RAHAT REGENCY, Ph: 0177-2623011
(2.5 kms from St. Bede's College)

HOTEL RAJAT, Ph: 0177- 2626588
(2.5 kms from St. Bede's College)