

# Chronicle

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Editor's Note

s spring brings in a flush green glory around us, I am pleased to bring back to you the May issue of SU Chronicle after a hiatus of several months owing to some technical issues. We truly apologize for this break in continuity. I thank Dr. Dhriti Roy who took charge of the newsletter while I was on study leave. She and the team did a commendable job. Thanks to those of you who contributed to this issue as these contributions are essential to the newsletter's success.

A plethora of events has happened in April both academic and non-academic. Workshops on plagiarism and software, drug awareness and seminar series on "Physics of Surfaces and Low-Dimensional Systems" are reported in this issue. Physics enthusiasts will find the report by one of the students informative.

One of the more exciting write-up in this newsletter is a student's colourful feature article on the weeklong festival, Ramailo SU-khim organized by SUSA. The collage brings out the vibrancy and the fun and frolic the students enjoyed.

To help us keep SU Chronicle alive, we want the staff and faculty to share about the activities, your academic engagements and endeavours. Till the next issue, enjoy the bounty of spring and keep hoping!

Jasmine Yimchunger

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Mailing Address
suchronicle@cus.ac.in
jyimchunger@cus.ac.in

#### Report on 35th International Geological Congress, Cape Town, South Africa

Prof V. C. Tewari, Department of Geology, Sikkim University attends the 35th INTERNATIONAL GEOLOGICAL CONGRESS (IGC), CAPE TOWN, SOUTH AFRICA.

He chaired the session on Past Global Climate Change in the Himalaya and the Future Implications session. Prof. Tewari also delivered the key note address in the Climate Change session on Himalaya.



#### AWARENESS PROGRAMME ON PREVENTION OF DRUGS ABUSE

Sikkim University NSS Cell in association with National Institute of Social Defence (NISD), Ministry of Social Justice and Empowerment, New Delhi organized an "Awareness Programme on prevention of Drugs Abuse" at Cauveri Hall, 5th Mile on 1st March, 2017. Dr. S. Manivannan, Dean of Students' Welfare and Dr. Rakesh Basnet, Provost, Sikkim University graced the occasion. The efforts and achievements of Sikkim University NSS Cell were highlighted to the audience by Dr. S. Manivannan, Dean of Students' Welfare, Sikkim University. The NSS officials from Sikkim University, nearby affiliated colleges and SRM University, 5th Mile were also present. There were two lecture sessions on problem of drugs abuse

particularly in Sikkim and preventive measures and role of student community delivered by Dr. C.S. Sharma, Head, Dept. of Psychiatry and Dr. Sonam Lassopa, Consultant Psychologist, STNM Hospital, Gangtok. The lectures were well delivered by the resource persons and various queries from the audience were clarified.



Dr. C.S. Sharma, Head, Dept. of Psychiatry, delivering lecture on "Problem of Drug Abuse particularly in Sikkim"

The programme had participation of nearly 200 NSS volunteers from Sikkim University, Damber Singh College, 6th Mile, Sikkim Govt. College, Tadong, Sikkim Govt. Law College, Burtuk, Sikkim Govt. College, Burtuk, Nehru Yuva Kendra Sangathan, Gangtok and SRM University, 5th Mile. The programme had skit performance on the theme by Sikkim University volunteers. There was inter-university/inter-college poster competition also. Sikkim University won first prize in poster competition on the theme "Prevention of Drugs Abuse". The second and third prizes were received by Sikkim Govt. Law College, Burtuk and Sikkim Govt. College, Tadong. The overall organization of the programme was successful and the participants learnt a lot and committed for creating further awareness on the same. Few prizes of various competitions organized by Sikkim University NSS Cell in previous semester were also given to the Sikkim University NSS volunteers by the dignitaries.

# International student and faculty meet on collaborative ecotourism research in the Himalaya

Department of Botany, Sikkim University organized International student and faculty meet on collabora-

tive ecotourism research in the Himalaya on 30 March to 2 April 2017. This meet was a part of project funded to Sikkim University by Himalayan University Consortium (HUC), a chapter of International Centre for Integrated Mountain Development (ICIMOD), Nepal. The student and faculty of collaborative institutes viz. Royal Thimpu College, Bhutan and Kathmandu University, Nepal includ-



ing students, faculty members and officials of Sikkim University attended the programme.

The programme was followed by two days of research finding presentation by the researchers and faculty from each of the collaborating institute and concluded by a field visit to one of the study sites.

#### Workshop on Mendeley and Plagiarism

The Department of Zoology, Sikkim University, organized a workshop on "MENDELEY AND PLAGIARISM SOFTWARE" on 24<sup>th</sup>-25<sup>th</sup> October, 2016. Mr Sanjeev K. Sunny, Deputy Librarian, IIT-Roorkie was invited as the resource person for the workshop. The objective of the workshop was to provide an exposure to young research-

ers on the basic concepts of Plagiarism and Referencing software. Around sixty participants comprising of PhD scholars and faculty members from various departments of the university attended the workshop. Professor Jyoti Prakash Tamang, Dean, School of Life Science, Sikkim University graced the inaugural session as the chief guest. The program began with welcome address



by Dr Basundhara Chettri, In-charge, Department of Zoology. Prof Tamang sensitized the students and urged them to be cautious about plagiarism issues which can be serious legal matter. He also lauded the department for organizing such a fruitful event. Inaugural session ended with the vote of thanks proposed by Dr Bisu Singh, Assistant Professor of the Department.

On the first day of the technical session, participants were introduced to plagiarism detection software- Turnitin. Different forms of plagiarism which occurs while preparing articles were discussed with examples. The possible effect of plagiarism on career of scholars and teachers was also discussed. In the afternoon session, participants were introduced to basics on Mendeley, a freeware referencing software. On the second day, hands-on-training was held on usage of Mendeley for citing and referencing articles, journals, and books.

In the valedictory session, participants shared their valuable feedback with the organizers and resource person of the event expressing their satisfaction on the outcome of the workshop. Dr B K Acharya, Assistant Professor of the Department made closing remarks on the importance of plagiarism and referencing software. The workshop was very fruitful and successful.

#### SEMINAR IN PHYSICS DEPARTMENT: A REPORT

The seminar series entitled was conducted in the Physics Department, Sikkim University from 4<sup>th</sup> to 7<sup>th</sup> April, 2017. The speaker was Professor Manabendra Mukherjee from Surface Physics Division, Saha Institute of Nuclear Physics, Kolkata. It was a four-day session of two-hour duration every day.

The topics covered were as follows:

Day 1: Introduction to Surface and Low Dimensional Systems

Day 2: Electronic Viewpoint of Nano-Materials

Day 3: Nucleation and Growth of Nano-Materials

Day 4: X ray Photoelectron Spectroscopy.

This report attempts to highlight the ideas presented in the seminar.

The first session commenced with a simple introduction to surface and low-dimensional systems in which dimensions reduce to the nano scale. This change in the dimension of



the system alters the physical as well as the chemical properties of the system. This was followed by the evaluation of surface energy which mainly depends on three parameters, namely Bond energy per bond, Number of bonds at broken surface, and number of bonds per unit area. After defining the surface energy, the processes that influenced the surface energy, that are, relaxation (including lateral relaxation), reconstruction, adsorption were discussed, followed by a relation that showed that the surface energy is equivalent to the surface Gibb's free energy. The talk then proceeded with the methods of reducing surface energy – first one being combination, which further included cintering and Ostwald ripening, the second one being agglomeration. Three different cases were taken up to study the transfer of atoms from one type of surface to another focussing on the volume transferred, the change in chemical potential and the solubility ratio.

The second session was devoted to the topic – Electronic Viewpoint of Nano-Materials in which the concepts of band gap, nearly free electron model were covered.

The third session introduced us to the interesting concepts of nucleation and growth of nano-materials. Nucleation is a process that forms an initial step in the formation of a new surface. Two kinds of nucleation, namely, homogeneous nucleation and heterogeneous nucleation were discussed. This further included the rate of nucleation and its dependence on various factors. This was followed by the types of growth process- diffusion limited growth and growth via adsorption.

In the final session, the speaker presented one of the various spectroscopic methods that are available for surface analysis – X-ray photoelectron Spectroscopy (XPS). The session began with the topic of surface Plasmon resonance which forms the basis of many standard tools for measuring the adsorption of material onto the surface of metal nanoparticles. The session continued with the discussion of the XPS technique along with many examples that were cited by the speaker that were useful in understanding the spectrum of different elements, compounds etc, using XPS.

The session concluded with a question and answer session wherein the doubts pertaining to the lecture were cleared and also the speaker gave us some useful tips and suggestions regarding research and higher studies. This was a very fruitful session as it helped expand our knowledge on the subject and it also served as refreshment. We are very grateful to Professor Manabendra Mukherjee for sharing with us his valuable time and his work and mostly for enlightening us with such beautiful concepts of Physics. We also extend our gratitude to the Head of the Department and all our teacher for arranging the lecture series and look forward to many more.

Jasmine Rai, 4th Semester, MSc Physics

### Publication

Jayanti Rai, and Bisu Singh. "Distribution of ABO Blood Groups and Rhesus Factor Percentage Frequencies Amongst the Populations of Sikkim, India." Proc Indian Nath Sci Acad. Vol. 83. No. 1. 2017.

#### **NSS Activities**

- > Visit to National Integration Camp, Bangalore from 3<sup>rd</sup> to 9<sup>th</sup> Jan., 2017 (Ms. Prerna Bharti, Mr. Krishna Gurung, Dept. of Management, Ms. Rachana Bista, Dept. of Sociology, Mr. Tarachand Basor, Dept. of Horticulture)
- > Visit to National Youth Festival, 12<sup>th</sup> to 16<sup>th</sup> Jan., 2017 at Rohtak, Haryana (Mr. Khomnath Sharma, Dept. of Horticulture, Mr. Lalit Pokhrel Sharma, Dept. of Geology, Ms. Sneha Rai, Dept. of Education, Ms. Bijaya Tamang, Dept. of Nepali)
- > Visit to National Integration Camp, Durg, Chhatisgarh from 9<sup>th</sup> to 16<sup>th</sup> Feb., 2017 (Mr. Shiva Sankar Kumar Bhagat, Dept. of Management, Mr. Yash Ramawat, Dept. of Music, Mr. Kundhy Pema Lachungpa, Dept. of Education, Ms. Veedhya Chettri, Dept. of Geography, Ms. Hemlata Sharma, Dept. of Psychology), The team had won best group dance award shared with West Bengal.
- > Visit to National Integration Camp, Bankura, W.B. from 7<sup>th</sup> to 13<sup>th</sup> February, 2017 (Ms. Niketa Chettri, Dept. of Microbiology, Mr. Biky Chowhan, Dept. of Computer Applications, Ms. Pintso Dam Bhutia, Dept. of Management, Mr. Lomash Sharma, Dept. of Horticulture), Ms. Niketa Chettri, Dept. of Microbiology was felicitated as best volunteer award for the National Integration Camp, Bankura, W.B.
- > Blood donation Camp on 24th Feb. 2017 in collaboration with SRM University at SRM University, 5th Mile:
- Dr. Salvin Paul, Dept. of Peace and Conflict Studies and Management, Dr. A.N. Shankar, Dept. of Commerce and other staff members
- > Awareness programme on prevention of drugs abuse organized by NSS Cell in association with National Institute of Social Defence, Ministry of Social Justice and Empowerment, New Delhi on 1<sup>st</sup> March, 2017 at Cauveri Hall, 5<sup>th</sup> Mile



Education Department bags second prize in Girls Cricket match. The contender that emerged victorious was Economics Department.

## Sikkim University Extravaganza – "Ramailo SU-khim 2017"

ikkim University witnessed a week-long cultural fest "Ramailo SU-khim 2017", under SUSA's secretary for cultural affairs, Anirudh Rai. The much-awaited cultural fest started on 10th April and culminated on 15th of April. The fest began with duet song competition and group dance competition where students from all the departments actively participated. It was evident the next day in the solo competition that the university has many nightingales. Seven participants from the solo competition were selected to perform on the final day of the festival. Day 3 was a grand affair as well, hosted by Mr. Lachungpa and Mr Tikendra Deep Dahal. The highlight was the first ever inter-college dance competition, where colleges like Palatine college, Pakyong, Sikkim Government college, Burtuk college, SRM university and Harkamaya college of education came forward to participate. And truly, we got to see the immense talent of the students. Sikkim Government College bagged the prize for the dance competition with their depiction of Mumbai terror attack. The audience were spell-bound and everyone became emotional. The dance competition was followed by acting and drama competition and we saw some prolific histrionic skills on the roll. Day 4 was definitely the most awaited for fashion lovers and music lovers. It was also the day when the titles, Mr. Sikkim University and Miss Sikkim University were presented. Students from all the departments showed their enthusiasm and actively participated in the fashion show where they showcased their talents. The show came to an end and Mr Tikendra deep dahal from Mass Communication department bagged Mr University and Miss Lochana Mainali from English department was crowned Miss University. The second half of the day was a bang on! It was the battle of bands. The Vibes, an acoustic-based band, Kaivalya, a girl dominated band, The Strings of Symphony and the Undefined Prophecy filled the air with eclectic voices and music. All the participants were exceptionally good and they definitely rocked the stage. Everyone got through the final round to perform on the final day.

The next day was even more exciting. SU has students from all over the country and what better way to celebrate each and everyone's culture than through "the cross-culture display". The students proudly displayed their culture in the form of dance, costumes and food. Yes, there were food stalls from various departments from different cultures. The most awaited and anticipated day had arrived. The heavy rain in the morning did not dampen the students' enthusiasm and their spirits were as high as it was on the first day. The cheering crowd was excited as their beloved fest had approached its closure. The grand finale of the "Ramailo SU-khim 2017" began with a dance performance by Sanjay Rana, the semi-finalist in the Northeast Got Talent. The closing programme also witnessed the finale of solo song, solo dance, duet dance, duet song, group dance, battle of bands and many more events. And the day came to an end with the much awaited DJ night. Students showed their energy and enthusiasm at their highest. It was really an enjoyable moment for all. Students showed their gratitude towards the SUSA executives for organising an amazing 5-day festival which they enjoyed thoroughly.