

## DEPARTMENT OF CHEMISTRY ACTIVITIES 2019-20

The Department of Chemistry organized its annual lecture titled “Luminaries of Indian Science: Life and Work of a Few Indian Scientists” by Professor Rajeev Gupta, Professor, Department of Chemistry, Dean of Student’s Welfare, Chairman NCWEB, University of Delhi on August 30, 2019. Professor Rajeev Gupta traced the trajectory of historical and contemporary issues in the life and work of a few Indian scientists.



**Dr. Manjula Singh and Dr. Rajeev Gupta**

Students from various Science departments visited CESCRA on September 11, 2019 to observe and learn in the soil testing laboratory, temperature gradient tunnel and Phenomics Centre. The visit was supervised by Dr. Shakeel A. Khan, Senior Scientist and Mr. Sandeep Kumar, Scientist at ICAR-IARI.



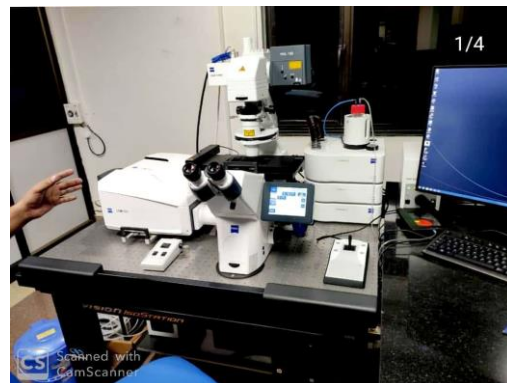
**Let's Preserve the Greens: CESCRA Lab Visit**



**Shivajians at the Phenomics Centre**



A group of 25 students along with four faculty members went to RCB, Faridabad on October 16, 2019. It was a full day visit. Students were given a lot of exposure to various instruments and devices such as Optical Microscope, Electron Microscope, Light Scattering Device, DNA Analyzer, Laser Scanning Confocal Microscope and Bioreactor.



The Department of Chemistry, Shivaji College organized its Annual Fest *Rastantrum 2019* on October 21, 2019. The chief guest, Dr. Lakshmi Raghupathy, former Director, Ministry of Environment Forests and Climate Change, Visiting Professor TERI, SAS Advisor and Consultant Sustainable Development visited the college to deliver a talk on "Climate Change Impacts and Sustainable Development Goals".



### **Social Change through Theatre: Nukkad Naatak**

- A lecture by Prof. Rajeev Gupta on “Luminaries of Indian Science: Life and Work of a Few Indian Scientists” on August 30, 2019.
- Annual Fest “**RASTANTRUM 2020**” on the theme “Climate Change 2.0: Its impact on Earth and Society” on October 21, 2019.
- An **Inter-college Laboratory Skill Training Programme** for Assistants/Attendants in the Chemical and Life Science Laboratories from November 27 to December 3, 2019.
- A **National Conference** on *Relationship between Chemical Science and Society* RCSS -2020 from January 16-17, 2020.

### **Educational Visits:**

- To Regional Centre for Biotechnology (RCB), Faridabad on October 16, 2019.
- To Centre for Environment Science and Climate Resilient Agriculture (CESCRA) at Nuclear Research Laboratory, Indian Agricultural Research Institute, New Delhi, on September 11, 2019, under the DBT Star College Scheme project.

## **Report of Webinar held on 19.09.2020**

The Department of Chemistry, Shivaji College organized a Webinar on the topic “National Education Policy (NEP)-2020 for Quality Higher Education” by Professor A. K. Bakhshi. The webinar was organized under the convenorship of Dr. P. K. Sahu and guidance of Dr. Rajni Kanojia, Teacher-In-Charge of Chemistry Department. The co-convenor and host of the webinar was Dr. Richa Arora. The speaker of the talk, Professor A. K. Bakhshi is currently Vice Chancellor of PDM University, Bahadurgarh, Haryana. The event was held on 19.09.2020 (Saturday) at 04:00 PM on Zoom platform. The talk was aired live on the Facebook page of the Shivaji College. For the webinar, 771 registrations were received.

The event witnessed participation from faculty and students of various colleges/universities/institutes across India. The participants joined the event through Zoom as well as Facebook. The event was formally inaugurated by Dr. Shiv Kumar Sahdev, Principal of Shivaji College.

The speaker for the webinar gave insights of National Education Policy (NEP)-2020, touching upon various aspects of NEP. He started from the first NEP and then moved on to the NEP 2020. He tried to explain some of the key factors of NEP and emphasized on how students and faculty can benefit from it. Professor Bakhshi reiterated on the fact that use of ICT tools and technology in education is the need of the hour. He explained how one can integrate classroom teaching with ICT tools to make it more interesting for the students.

Professor Bakhshi ended his talk by sharing some motivational quotes and videos emphasizing on the importance of hard work and perseverance.

The talk was followed by a Question/Answer session. The participants really appreciated the talk and the presentation of Professor Bakhshi and they thoroughly enjoyed it and benefitted from it, which was very clear from the comments they were posting in the chat section of Zoom app and comment section of Facebook page.

The webinar ended with a vote of thanks by the senior most faculty of the Department of Chemistry of Shivaji College, Dr. Manjula Singh.

## Post Event Summary Report

**Name of the Event:** Webinar on “The Contribution of DRDO In Prevention And Management of COVID-19 Pandemic”

**Date of the Event:** September 26<sup>th</sup>, 2020

**Platform:** Zoom

**Link:** <https://us02web.zoom.us/j/83565375762>

**Meeting ID:** 835 6537 5762

**Number of persons participated:** 170

A webinar entitled “The Contribution of DRDO In Prevention And Management of COVID-19 Pandemic” was organised by **the Department of Chemistry of Shivaji College, University of Delhi** for the students, scholars and teaching faculties on 26 September 2020, at 4:00 P.M on zoom platform. The webinar was open to public and approximately 170 people were in attendance. During the session attendees share their opinions, thoughts and suggestions for consideration through chat box available to them in zoom platform. The event started with the presence of **Teacher Incharge Dr. Rajni kanojia**. Before starting the event Saraswati Vandana was chanted with folded hands.

The Principal of the college, **Dr. Shiv Kumar Sahadev** has inaugurated the programme by his motivated speech. The event was arranged with a purpose of sharing the knowledge of contributions made by DRDO in managing and preventing the COVID-19 situations.

The Keynote speaker of the webinar was **Dr. Himanshu Ojha**, Scientist E and Joint Director at INMAS DRDO. He was welcomed by the host of the session i.e. Co-Coordinator of the webinar **Dr. Pallavi Agarwal**. She introduced him by stating all the achievements and contributions Dr. Himanshu Ojha has made in all these years. He has a long year of experience in DRDO.

### OVERVIEW OF DISCUSSION :

Dr. Himanshu Ojha started the main talk by providing an overview of DRDO and its way of working and implementing things. DRDO has been on alert since the detection of the 1st case of COVID-19 in India. He also talked about various sanitizing tools that were made considering the prevailing situation in the country and whole world.

He discussed about a five layered N-99 masks which offer a much higher surface area and very fine pores to trap viruses and bacteria, Full body disinfection chambers also known as

Personnel Sanitization Equipment, which is basically a walk-through enclosure for personnel decontamination.

DRDO has also developed portable sanitization equipment for spraying decontamination solution consisting of 1% Hypochlorite (HYPO) solution for sanitization of open areas.

Dr. Ojha emphasized the use of cheap chemical per chlorate acid for sanitisation rather than per iodate which is way more expensive.

He talked about vehicle sanitization equipment comprising of a fog generator and a few small innovative accessories such as a pocket sanitizer and a touch sanitizer pen which are developed to enable safe day to day work with respect to COVID-19 prevention

A UV Disinfection Tower called as “UV Blaster” is developed which can be used for rapid and chemical free disinfection of office spaces and buildings.

The speech by eminent speaker was followed up by query session which was taken up by **Dr. Shilpa Jain**; member of organizing committee. Participants raised relevant questions and shared thoughts regarding the working of DRDO in this pandemic situation as well as in general. A vote of thanks was given by the **Coordinator of the webinar, Dr. Anil Krishan Aggarwal**. This was followed up by providing feedback form to the participants so that they can share their views regarding the webinar to improve the sessions that will be conducted in the mere future. The overall organization and deliverance of the webinar was helpful and satisfied the participants.

### Pics of webinar **Saraswati Vandana**



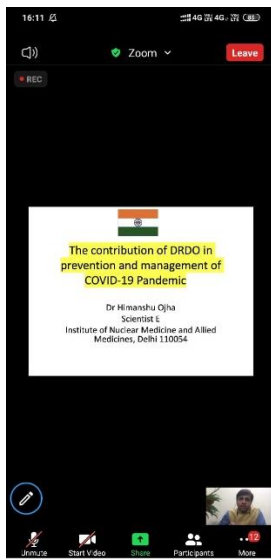
Inauguration by The Principal of College; Dr. Shiv Kumar Sahdev

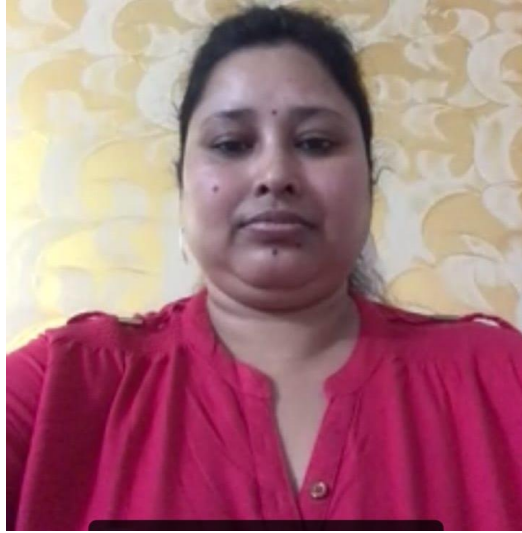






Invited Speaker





### PEN AND POCKET SANITIZER ACCESSORIES

- ✓ A pocket sanitizer is developed so that it is easy to carry in pocket or purse. It has a protection cap that prevents its accidental usage and a press based control is provided for the dispensing of the sanitizer product. The device can be refilled by the user through the refilling site. This pocket spray device is cost effective, easy to handle and has leak-proof refillable mechanism.
- ✓ A touch sanitizer pen is developed to prevent the spread through touch of lift buttons, electric switches etc. This touch sanitizer pen is easy to carry in pocket or purse. This touch sanitizer pen is cost effective, easy to handle and has refillable mechanism.



shu Ojha's screen

SUNIL YADAV      Dr Himanshu Ojha

Dr. Priyanka kumari      Uma Narang

Dr. N. G. Giri      Sahil

Dr. Pooja Saluja      Richa Arora

Dr. Rajat Kevaja      Dr. N. G. Giri      Sahil

Rahul Singhal      Dr Anil      Nandinder Kumar

Musammil      Anil kumar      RAJESH KUMAR      SAMANT SAHNI

SOMU      OPPO A3s      Poojand Shivaji      Laxmi Man

Dr. Rajat Kevaja      Dr. N. G. Giri

Sahil      Dr. Shipra Jain      Dr. Pooja Saluja      Uma Narang




Musammil      Anil kumar      RAJESH KUMAR      SAMANT SAHNI      SOMU

OPPO A3s      Laxmi Man      Richa Arora      Nandinder Kumar

### Disinfection and sanitization activities of Division of CBRN Defence

- ✓ Prepared and distributed 2640 liters WHO recommended Isopropyl alcohol based sanitizer and 1560 Liter HOCl in various DRDOs Delhi based Labs and offices.
- ✓ Has been maintaining Carbolpol R940 based foot and tyre sanitization mat in DRDO Har and other labs since April 2020.
- ✓ Rendered training Delhi based DRDO Labs for routine and deep sanitization.



- Provided back-pack sprayers and high pressure pumps to RAC, CCE(R&D) North, EMU Delhi, SSPL, JCB, O/o DGLS, LASTE. Besides, the division has trained Delhi based DRDO Labs for routine and deep sanitization.
- REMCOR wipes developed and distributed in O/o Chairman DRDO, O/o DGLS, and other DELHI DRDO Labs
- DRDO disinfection committee:- INMAs acts as nodal agency

high pressure pump    back-pack sprayer    Remcor wipes


[Vehicle testing](#)   [Robotic testing](#)   [Int Dis](#)

The division under the leadership O/o DGLS had sanitized Gandhi Smriti Art Museum for the visit of Hon'ble PM on 07-08 Aug 2020

Dr Himanshu Ojha's screen

### Ultra swachh




**Purpose :** Disinfect a wide range of materials, including Personal Protective Equipment (PPEs), electronics items, fabrics, etc.

- ✓ Ozonated Space Technology for disinfection with UV Irradiation
- ✓ double layered with specialized Ozone sealant technology
- ✓ catalytic converter to ensure environment friendly exhaust i.e. only oxygen and water
- ✓ compliance with International Standards of Industrial, Occupational, Personal and Environmental Safety.
- ✓ quick disinfection cycle

### UV BLASTER – AREA UV DISINFECTION SYSTEM

- ✓ A UV Disinfection Tower called as "UV Blaster" is developed.
- ✓ The equipment may be used for rapid and chemical free disinfection of office spaces and buildings.
- ✓ The studies of effect of UV-C radiation on other Corona family of viruses like SARS & MERS, the UV-C dose for 99.9% disinfection of COVID-19 is deduced as 30 mJ/cm<sup>2</sup>.
- ✓ It is remotely operated through laptop/mobile phone using wi-fi link.
- ✓ UV-C Power:
  - ✓ 6 lamps each with 43 Watts of UV-C power at 254 nm wavelength arranged for 360 deg. illumination.
  - ✓ UV intensity at 2 m distance = 0.4 mW/cm<sup>2</sup>.
- ✓ Disinfection Time:
  - ✓ ~10 minutes for a room of ~ 12 ft x 12 ft dimension.
  - ✓ ~30 minutes for 400 ft<sup>2</sup> (by positioning equipment at different locations within the room).
- ✓ Safety Feature:
  - ✓ Automatic switch off on accidental opening of room/human intervention.
  - ✓ Key to arm operation.
- ✓ It costs around Rs. 1.5 Lakh per unit for an order quantity of two units. The coll. m. y. colle. dbarwtko lbs. than Rs. 80,000/- for reasonable numbers.

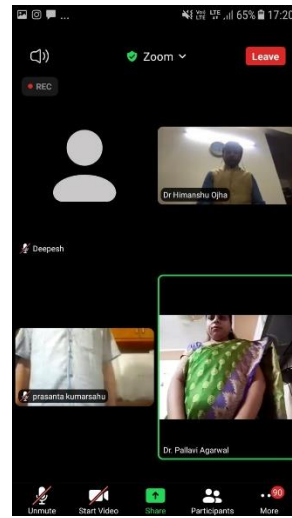


UV treatment is proven to reduce air and surface contamination up to 99.99%.

## Question session



# National Anthem







# SHIVAJI COLLEGE

NAAC ACCREDITED GRADE "A"  
UNIVERSITY OF DELHI



## DEPARTMENT OF CHEMISTRY

Organizes  
a Webinar on

### National Education Policy (NEP)-2020 for Quality Higher Education

By

19 SEPTEMBER, 2020  
04:00 PM

Professor A. K. Bakhshi  
Vice Chancellor, PDM University,  
Bahadurgarh



Last date of registration: 16-09-2020, 5:00 p.m.

Link for registration:

[https://docs.google.com/forms/d/1ZWj\\_4GwbISzjsLqZQoJnU\\_qsYuP4XhOw\\_pAvWIVTwLo/edit](https://docs.google.com/forms/d/1ZWj_4GwbISzjsLqZQoJnU_qsYuP4XhOw_pAvWIVTwLo/edit)

Platform for Webinar: Zoom/YouTube

No Registration Fee

Teacher-In-Charge

Dr. Rajni Kanojia

Convenor

Dr. P. K. Sahu

Co-Convenor

Dr. Richa Arora

Patron

Dr. Shiv Kumar Sahdev  
Principal



# SHIVAJI COLLEGE

NAAC ACCREDITED GRADE "A"  
UNIVERSITY OF DELHI



## DEPARTMENT OF CHEMISTRY

Organizes

DIGITAL LOGO MAKING COMPETITION

No  
registration  
fee

## Instructions for participants

Theme:  
Chemistry  
as a  
Symbol

1. Only single participant entries shall be allowed.
2. Only one entry per participant is allowed.
3. Logo in digital format only shall be acceptable.
4. Participants must submit the logo in PNG/JPEG format at mail ID: [starcollegechemshc@gmail.com](mailto:starcollegechemshc@gmail.com) latest by 20.09.2020, 05:00 pm. No entries shall be accepted beyond deadline.

Link for registration:

[https://docs.google.com/forms/d/16kgKA-Y9MGeWC5AMawnbztY40GNrbl\\_Pgi9wD1iHR10/edit](https://docs.google.com/forms/d/16kgKA-Y9MGeWC5AMawnbztY40GNrbl_Pgi9wD1iHR10/edit)

Teacher-In-Charge  
Dr. Rajni Kanojia

Convenor  
Dr. P. K. Sahu

Co-Convenor  
Dr. Richa Arora

Patron  
Dr. Shiv Kumar Sahdev  
Principal





# SHIVAJI COLLEGE

NAAC ACCREDITED GRADE "A"  
UNIVERSITY OF DELHI



## DEPARTMENT OF CHEMISTRY

Organizes

DIGITAL COLLAGE MAKING COMPETITION

No  
registration  
fee

### Instructions for participants

1. Only single participant entries shall be allowed.
2. Only one entry per participant is allowed.
3. Collage in digital format only shall be acceptable.
4. Participants must submit the collage in PNG/JPEG format at mail ID: [starcollegechemshc@gmail.com](mailto:starcollegechemshc@gmail.com) latest by 30.09.2020, 05:00 pm. No entries shall be accepted beyond deadline.

Theme:  
Academic  
Life during  
Lockdown

Link for registration:

<https://docs.google.com/forms/d/1z8iuwwcJRfnVQaQra9KZIDgxargniN2BFUBA2ZYDUzl/edit>

Teacher-In-Charge  
Dr. Rajni Kanojia

Convenor  
Dr. P. K. Sahu

Co-Convenor  
Dr. Richa Arora

Patron  
Dr. Shiv Kumar Sahdev  
Principal



# SHIVAJI COLLEGE

**NAAC ACCREDITED GRADE "A"**  
**UNIVERSITY OF DELHI**  
**DEPARTMENT OF CHEMISTRY**



Department  
of Biotechnology  
Govt. of India

**under the aegis of DBT sponsored Star College Scheme**

**Organizes**

**a Webinar on**

**"Correlation of Environmental Chemistry in National  
Education Policy"**



**Dr. Balaram Pani**

**Dean of Colleges, Delhi University**

**Chairman GB, SOL**

**Director, Campus of Open Learning**

**27 SEPTEMBER, 2020**

**04:00 PM**

**Last date of registration:** 24-09-2020, 5 p.m.

**Link for registration:** [https://docs.google.com/forms/u/1/d/1Y\\_VfYbM-Jof7yMYkgeaGQO1\\_jahYvKOyt-kfCKpbf-U/edit](https://docs.google.com/forms/u/1/d/1Y_VfYbM-Jof7yMYkgeaGQO1_jahYvKOyt-kfCKpbf-U/edit)

**Platform for Webinar:** Zoom/YouTube

**No registration fee**

**Coordinator**

**Dr. Darshan Malik**

**Convenor**

**Dr. P. K. Sahu**

**Co-Convenor**

**Dr. Richa Arora**

**Patron**

**Dr. Shiv Kumar Sahdev  
Principal**





# Shivaji College

NAAC Accredited Grade 'A'  
University of Delhi

## Department of Chemistry

Presents  
A webinar

on

“The Contribution of DRDO in prevention and management of COVID-19 Pandemic”

By

**Dr. Himanshu Ojha**

**Scientist E & Joint Director, INMAS DRDO**



Date: 26 September 2020

Time: 4:00 PM

Platform: Zoom/You Tube

Link for Registration:

[https://docs.google.com/forms/d/e/1FAIpQLSfQl9P5RX8ijplmSBFscPnJaiRSj0A9jF5GgE0aJ3bNdRtIQA/viewform?usp=sf link](https://docs.google.com/forms/d/e/1FAIpQLSfQl9P5RX8ijplmSBFscPnJaiRSj0A9jF5GgE0aJ3bNdRtIQA/viewform?usp=sf_link)

No Registration Fees

Last date for registration: 23 Sept 2020

E-certificates will be provided to participants.

Email Id: [chemistrywithshivaji@gmail.com](mailto:chemistrywithshivaji@gmail.com)

Teacher In Charge  
Dr. Rajni Kanojia

Convenor  
Dr. Anil Krishan Aggarwal

Co-Convenor  
Dr. Pallavi Agarwal

Patron  
Dr. Shiv Kumar Sahdev  
Principal

