



**Goa University**  
**Discipline of Physics**  
**School of Physical and Applied Sciences**  
**Report on Guest lecture by Prof. Panče Naumov**

<b>1. Title of the program</b>	<b>Guest lecture on “Dynamic Organic Crystals”</b>
<b>2. Date and Time</b>	28-01-2026, 11.00 am – 12.00 pm
<b>3. Mode of conduct (Physical/Online)</b>	Physical
<b>4. School</b>	School of Physical and Applied Sciences (SPAS)
<b>5. Collaborating Agency/School/Directorate</b>	N/A
<b>6. Detail of the Resource Person (Brief biodata)</b>	<p>Prof. Panče Naumov is a professor of chemistry at New York University Abu Dhabi (NYUAD). He acts as the Director of the NYUAD Center for Smart Engineering Materials (CSEM) and leads the Smart Materials Lab (SML) at NYUAD. He obtained his PhD from the Tokyo Institute of Technology in 2004. Currently, he serves as an associate Editor for the <i>Journal of the American Chemical Society (JACS)</i> and a member of the editorial or advisory boards of <i>Angewandte Chemie, Chemistry - A European Journal, Chemistry - an Asian Journal, Smart Molecules, SmartMat, FlexMat, Wearable Electronics</i> and <i>ChemNanoMat</i>. He is a fellow of both the American Chemical Society (ACS) and the</p>

	Royal Society of Chemistry (RSC). His research focuses on materials that hold the potential for efficient and controllable transduction of energy in the form of light or heat into work that can be used in a range of devices.
<b>7. Number of Faculty attended</b>	9
<b>8. Number of Student attended</b>	45
<b>9. No. of external students/faculty/other participants</b>	1
<b>10. The objectives of the Program</b>	<ul style="list-style-type: none"> <li>• To know the current status of research in the area of dynamic organic crystals</li> <li>• Opportunity to listen and interact with a known scientist and speaker, Prof. Panče Naumov</li> <li>• To inspire students to pursue research after their master degree</li> <li>• To promote experiential learning beyond the confines of classrooms</li> </ul>
<b>11. Description of the Program/activity/event</b>	The event was held at AG-34, SPAS, Goa University. Prof. Panče Naumov gave a detailed presentation on dynamic organic crystals, covering elastic and plastic bending of crystals, self-healing crystals and their mechanisms, shape-memory effects in organic crystals, and the use of crystals for waveguide and phosphorescence applications. Students discussed the topic in the question-and-answer session and asked many curious questions of the speaker. Overall, the event was highly informative and inspiring.
<b>12. Benefit/Key outcomes of the Program</b>	The speaker's presentation included basics and recent developments in the field. His research results have been published in well-respected journals and have inspired students. The lecture provided students with a clear understanding of the mechanisms underlying dynamic crystals. It is expected that many master students may join doctoral research programs in their higher studies. It also encouraged students to approach their dissertations with greater clarity, discipline,

	and academic integrity
<b>13. Enclosures with report</b>	Notice, Flyer, Abstract of the guest lecture, Geo-tag photos, Attendance sheet

Signature:

Name of coordinator: Dr. Venkatesha Hathwar

Designation: Programme Director, Physics

Signature:

Dean of SPAS: Prof. Ramesh V. Pai

Seal of the School







School of Physical and Applied Sciences  
Goa University



Guest Lecture  
on  
Dynamic Organic Crystals

By  
Prof. Panče Naumov  
New York University, Abu Dhabi, UAE



Date: 28 January 2026  
Time: 11:00AM

Venue: AG-34, SPAS ,Faculty Block A

You are cordially invited

SCHOOL OF PHYSICAL AND APPLIED SCIENCES  
GOA UNIVERSITY

GUEST LECTURE ON

“Dynamic Organic Crystals”

Prof. Panče Naumov



Smart Materials Lab, New York University Abu Dhabi, Abu Dhabi, UAE

Date: 28<sup>th</sup> January 2026 at 11.00 AM;

Venue: AG-34, SPAS, Faculty Block A

**Abstract:** The anticipated shift in focal point of interest of solid-state chemists, crystal engineers and crystallographers from structure to properties to function of organic solids parallels the need to apply our accumulated understanding of the intricacies of crystal structure to explaining the related properties, with the ultimate goal of harnessing that knowledge in applications that require soft, light-weight, and/or biocompatible organic solids. In these developments, the adaptive molecular single crystals [1-5] warrant a particular attention as a new class of materials for light, flexible, and environmentally benign devices, primarily memories, capacitors, sensors, and actuators. United under the umbrella term “crystal adaptionics”, the recent research efforts aim to realistically assess the appositeness of dynamic crystals for applications that require fast, reversible and continuous operation over prolonged periods of time. With the aim to highlight the most recent developments in the research of adaptive molecular crystals, this lecture will discuss their assets and pitfalls.

#### References

- [1] Mahmoud Halabi, J., Al-Handawi, M. B., Ceballos, R. & Naumov, P. (2023) *J. Am. Chem. Soc.* 145, 12173.
- [2] Awad, W. M., et al. (2023) *Chem. Soc. Rev.* 52, 3098.
- [3] Karothu, D. P., Mahmoud Halabi, J., Ahmed, E., Ferreira, R., Spackman, P. R., Spackman, M. A. & Naumov, P. (2022) *Angew. Chem. Int. Ed.* 61, e202113988.
- [4] Spackman, P. R., Grosjean, A., Thomas, S. P., Karothu, D. P., Naumov, P. & Spackman, M. A. (2022) *Angew. Chem. Int. Ed.* 134, e202110716.
- [5] Mahmoud Halabi, J., Ahmed, E., Sofela, S. & Naumov, P. (2021) *Proc. Nat. Acad. Sci.* 118, e2020604118.



**Brief CV:** Panče Naumov is a professor of chemistry at New York University Abu Dhabi (NYUAD). He acts as the Director of the NYUAD Center for Smart Engineering Materials (CSEM) and leads the Smart Materials Lab (SML) at NYUAD. He obtained his PhD from the Tokyo Institute of Technology in 2004. Currently, he serves as an associate Editor for the *Journal of the American Chemical Society (JACS)* and a member of the editorial or advisory boards of *Angewandte Chemie*, *Chemistry - A*

*European Journal*, *Chemistry - an Asian Journal*, *Smart Molecules*, *SmartMat*, *FlexMat*, *Wearable Electronics* and *ChemNanoMat*. He is a fellow of both the American Chemical Society (ACS) and the Royal Society of Chemistry (RSC). His research focuses on materials that hold the potential for efficient and controllable transduction of energy in the form of light or heat into work that can be used in a range of devices.

GUEST LECTURE ON

"Dynamic Organic Crystals"

Prof. Panče Naumov

Smart Materials Lab, New York University Abu Dhabi, Abu Dhabi, United Arab Emirates

Date: 28<sup>th</sup> January 2026 at 11.00 AM

Venue: AG-34, SPAS, Faculty Block A

S. No	Name	School	Signature
1	Venkatesha Hathwar	SPAS	
2	<del>Sudhir Cherukulajsmath</del>	SPAS	
3	Bholanath Pahari	SPAS	
4	Ramesh v Pai	SPAS	
5	Vidhita Naik	SPAS	
6	Reehma Raut Desso	SPAS	
7	Akshodha Gaunkar	SPAS	
8	Sayjal Kalangutkar	SPAS	
9	Prakriti Naik	SPAS	
10	Mahendra Chaudhary	SPAS	
11	Shubham Gawas	SPAS	
12	Arani Talkattar	SPAS	
13	Nadia Coelho	SPAS	
14	Rahamutunissa Shah	SPAS	
15	Myren Azavedo	SPAS	
16	Shweta Bhosle	SPAS	
17	Gayatri Naik	SPAS	
18	Sejal Popkar	SPAS	
19	Irishika Bukkam	SPAS	
20	Bibhu P. Nayak	SPAS	
21	Sachin Bharti	SPAS	
22	Juhi Mayekar	SPAS	
23	Erisha Franco	SPAS	
24	Vira Desso	SPAS	
25	Vinita S. Diukar	SPAS	
26	Tanaya M. Patkar	SPAS	
27	Shreya N. Naik	SPAS	
28	Diksha Karmalkar	SPAS	
29	Joshua M.	SPAS	
30	Joshle Colaco	SPAS	
31	Ranjita Patil	SPAS	

