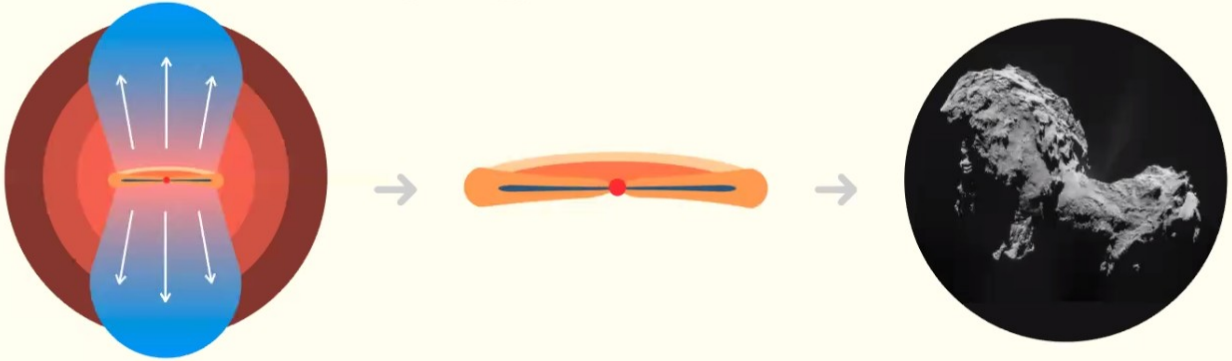
DIG(Dust,Ice and Gas) Astrochemistry

17th-18th Nov,2022
(VIRTUAL)

This project has received funding from the Comunidad de Madrid through the Atracción de Talento Investigador (Doctores con experiencia) Grant (COOL: Cosmic Origins Of Life; 2019-T1/TIC-15379) and from the Agencia Estatal de Investigación (AEI) through the Ramón y Cajal programme (grant RYC2020-029387-I) financed by MCIN/AEI /10.13039/501100011033.

Complex Chemistry in Star Formation

The Synergy of ALMA and JWST



理化学研究所 RIKEN
開拓研究本部 Cluster for Pioneering Research

Yao-Lun Yang
Research Scientist, Star and Planet Formation Laboratory, RIKEN
DIG (Dust, Ice, and Gas) Astrochemistry
November 17, 2022

SPFL Star and Planet Formation Laboratory
科研費 KAKENHI

You are viewing Dr. Laura Colzi's screen | View Options

DIG (Dust, Ice and Gas) Astrochemistry

17-18th November, 2022
(virtual)

新潟大学 量子研究センター
Niigata University, Quantum Research Center

Nitrogen isotopic ratios across the Galaxy

Laura Colzi
(Centro de Astrobiología, CSIC-INTA)
November 17th 2022

CENTRO DE ASTROBIOLOGÍA · CAB
ASOCIADO AL NASA ASTROBIOLOGY PROGRAM

AEI Retos project
PID2019-105552RB-C41

Dr. Laura Colzi
Dr. Christine Joblin

Unmute | Start Video | Participants 90 | Q&A | Share Screen | Chat | Raise Hand | Settings | More | Leave

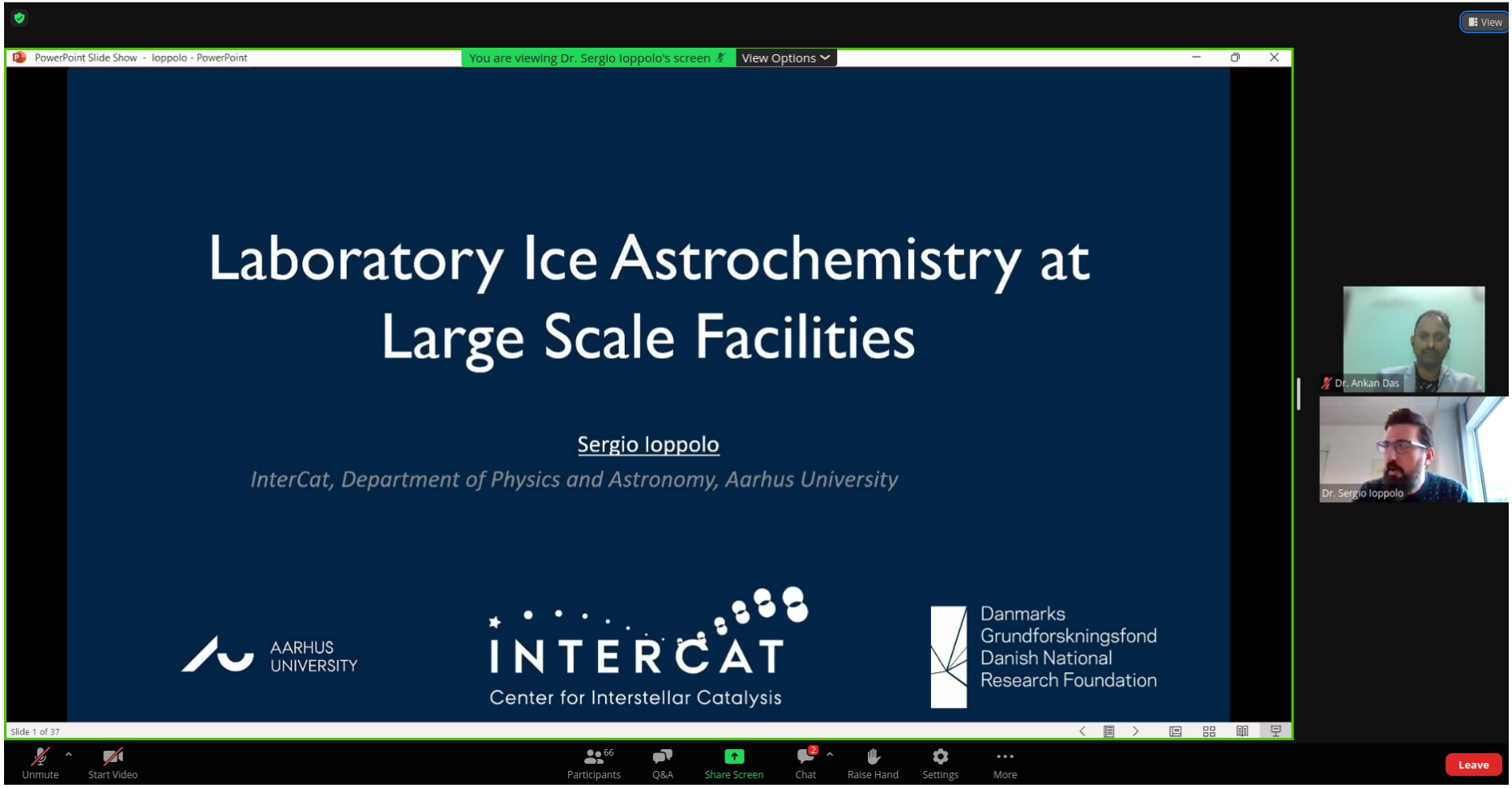
Temperature and Kinematic structure of the burst-phase protobinary SVS13A using DCN and COMs

Tien-Hao Hsieh (CAS@MPE)

Jaime E. Pineda, Dominique Segura-Cox, Paola Caselli, María José Maureira and PRODIGE team

DIG-Astrochemistry meeting 2022 Nov. 17th

thhsieh@mpe.mpg.de


View
PowerPoint Slide Show - Ioppolo - PowerPoint
You are viewing Dr. Sergio Ioppolo's screen
View Options
Laboratory Ice Astrochemistry at Large Scale Facilities
Sergio Ioppolo
InterCat, Department of Physics and Astronomy, Aarhus University
AARHUS UNIVERSITY
INTERCAT
Center for Interstellar Catalysis
Danmarks Grundforskningsfond
Danish National Research Foundation
Slide 1 of 37
Dr. Ankan Das
Dr. Sergio Ioppolo
Unmute
Start Video
Participants
66
Q&A
Share Screen
Chat
2
Raise Hand
Settings
More
Leave

CHEMICAL EVOLUTION OF CO_2 ICES UNDER PROCESSING BY IONIZING RADIATION:

CHARACTERIZATION OF NON-OBSERVED SPECIES AND CHEMICAL EQUILIBRIUM PHASE EMPLOYING THE PROCODA CODE

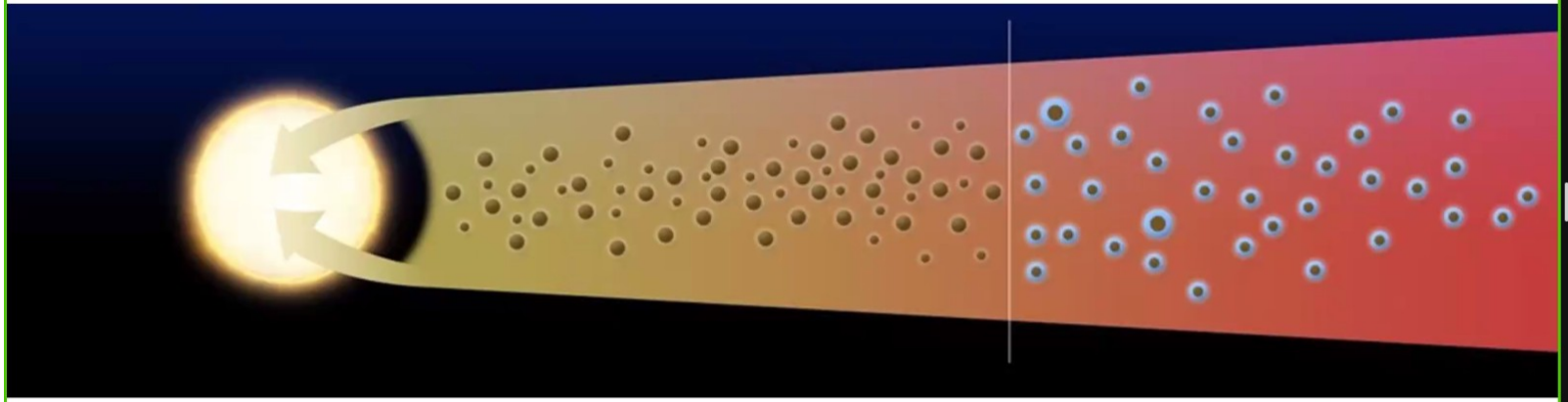
(Pilling *et al* 2022 *ApJ* **925** 147)

Sergio Pilling[1*] , Geanderson Carvalho[1] , Will Robson Rocha[2]

1 UNIVAP - Universidade do Vale do Paraíba, Brazil.
2 Leiden University, Netherlands.
* sergiopilling@yahoo.com.br

Acknowledgments:
CNPq, FAPESP, CAPES, FVE-UNIVAP

Cooking with the stars:
Fundamental desorption parameters



Swiss National Science Foundation

PlanetS

Niels F.W. Ligterink

SNSF Ambizione fellow, University of Bern

niels.ligterink@unibe.ch

UNIVERSITÄT BERN

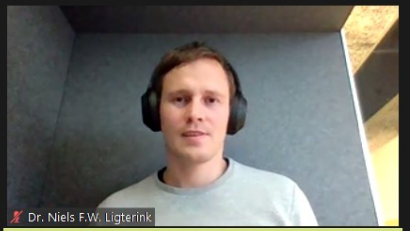
Towards a Better Understanding of Sulphur Radiation Chemistry in Astrochemical Ices

DUNCAN V. MIFSUD

Ultraviolet photon-induced trapping of photoproducts in amorphous solid water

Gaurav Vishwakarma
DST Unit of Nanoscience and Thematic Unit of Excellence
Department of Chemistry, Indian Institute of Technology Madras, India
g18iitm@gmail.com

DIG 2022 | DIG (Dust, Ice and Gas)-Astrochemistry | November 17, 2022



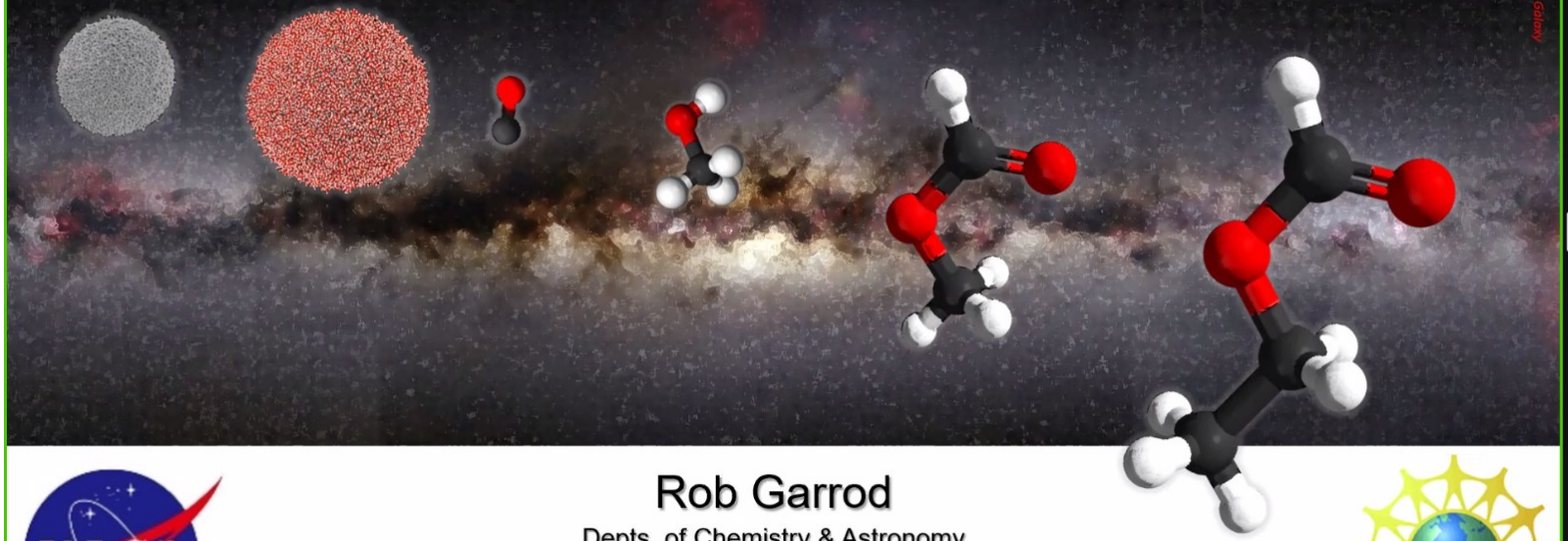
You are viewing Dr. Robin Garrod's screen

View Options

View

New models of hot and cold chemistry in star-forming regions

Original MW image: The Daily Galaxy



Rob Garrod

Depts. of Chemistry & Astronomy

University of Virginia

Dr. Robin Garrod

Prof. Cristina Puzzarini

Unmute | Start Video | Participants 62 | Q&A 1 | Share Screen | Chat | Raise Hand | Settings | More | Leave

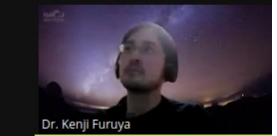
DIVISION OF SCIENCE
国立天文台 科学研究部
National Astronomical Observatory of Japan

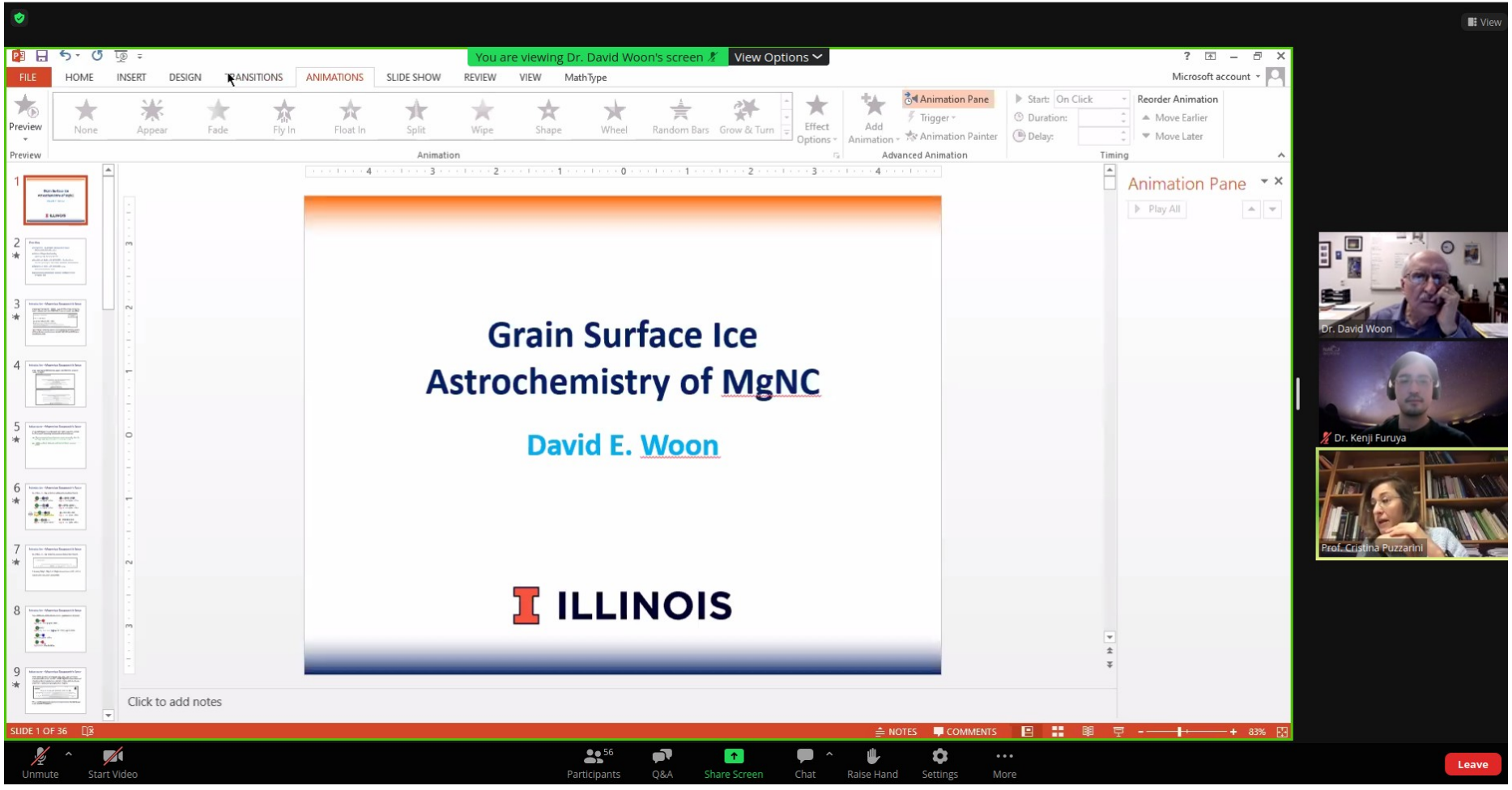
国立天文台 NAOJ

Chemistry and transport of volatiles in protoplanetary disks

Kenji Furuya

(National Astronomical Observatory of Japan)




You are viewing Dr. David Woon's screen
View Options
FILE
HOME
INSERT
DESIGN
TRANSITIONS
ANIMATIONS
SLIDE SHOW
REVIEW
VIEW
MathType
Microsoft account
Preview
None
Appear
Fade
Fly In
Float In
Split
Wipe
Shape
Wheel
Random Bars
Grow & Turn
Effect Options
Add Animation
Animation Pane
Trigger
Animation Painter
Start: On Click
Duration:
Delay:
Reorder Animation
Move Earlier
Move Later
Animation
Advanced Animation
Timing
Grain Surface Ice Astrochemistry of MgNC
David E. Woon
ILLINOIS
Animation Pane
Play All
Click to add notes
SLIDE 1 OF 36
NOTES
COMMENTS
83%
Dr. David Woon
Dr. Kenji Furuya
Prof. Cristina Puzzarini
Unmute
Start Video
Participants
56
Q&A
Share Screen
Chat
Raise Hand
Settings
More
Leave

You are viewing Giacomo Mulas's screen View Options

Computing the ingredients to simulate the photophysics of PAHs in space

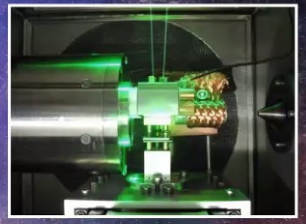
Giacomo Mulas
INAF - Osservatorio Astronomico di Cagliari
Institut de Recherche en Astrophysique et Planétologie

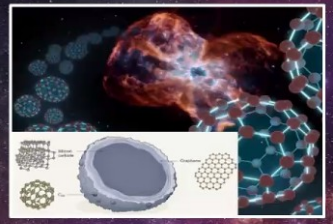
DIG (Dust, Ice and Gas) Astrochemistry 17-18th November 2022

Unmute Start Video Participants 55 Q&A Share Screen Chat Raise Hand Settings More Leave

西安交通大學
XI'AN JIAOTONG UNIVERSITY

Metallic buckyballs as promising carriers of mysterious unidentified infrared emission bands





Gao-Lei Hou

School of Physics, Xi'an Jiaotong University

DIG (Dust, Ice and Gas) Astrochemistry
Nov. 17-18, 2022 (Virtual)

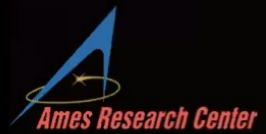
Modeling Titan's Upper Atmospheric Gas Chemistry at Low Temperature

David Dubois[1], Alexander Raymond, Ella Sciamma-O'Brien, and Farid Salama

Dust, Ice and Gas (DIG) Astrochemistry Workshop

Thursday 17th November 2022

[1]NASA Ames Research Center, Mountain View, CA, USA

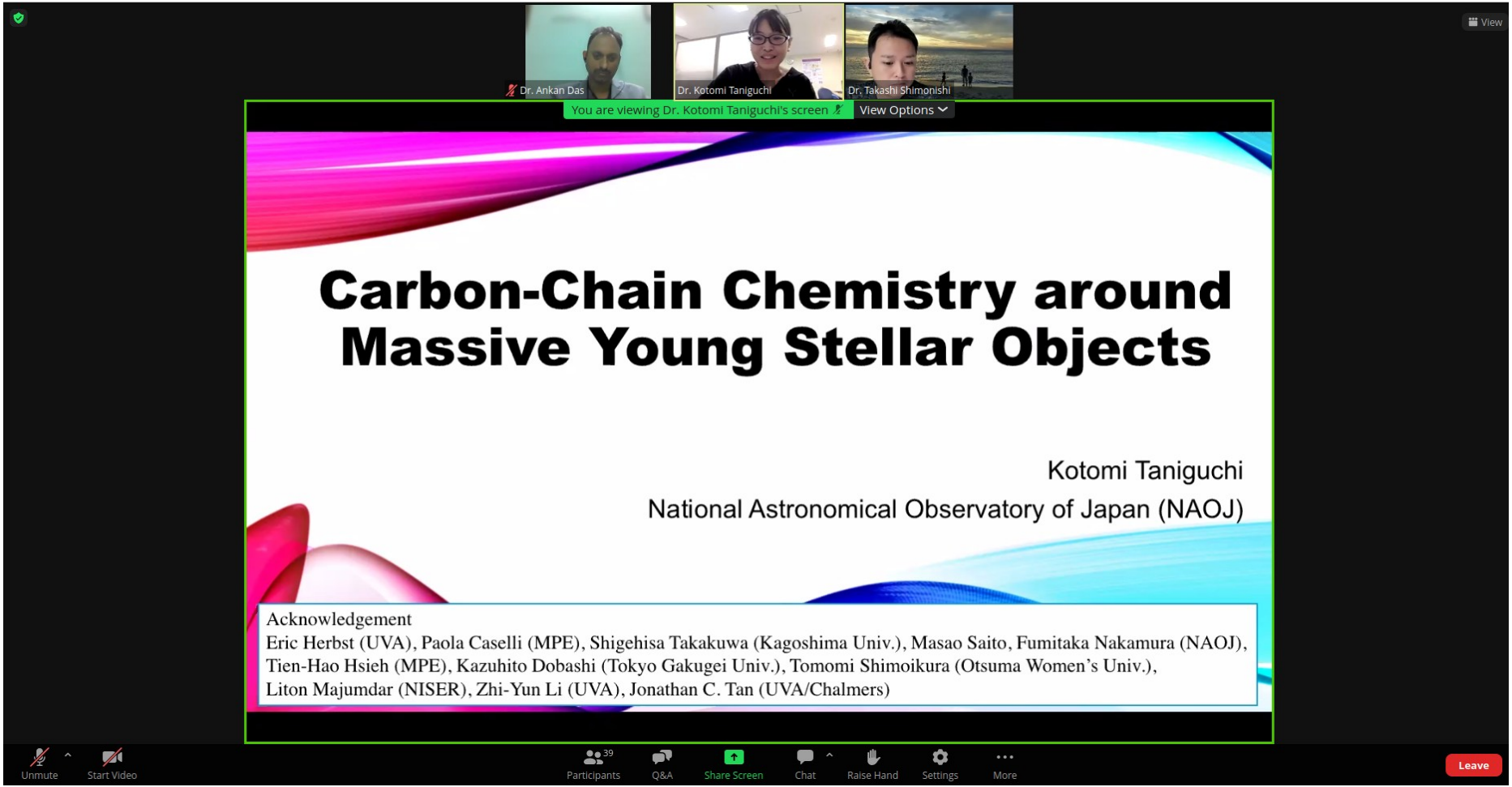


Space Science & Astrobiology

david.f.dubois@nasa.gov

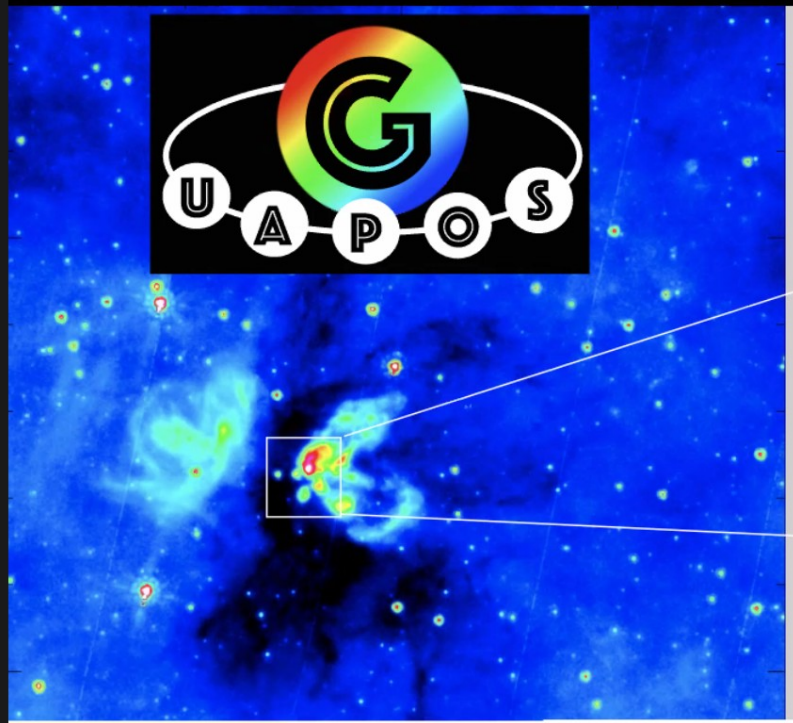
Early works on Possible Radiative Associations Involving Metal-Ions in the ISM

- Smith, D.; Adams, N. G.; Alge, E.; Herbst, E. Association Reactions of Na^+ and Some Implications for Interstellar Chemistry. *Astrophys. J* ***1983***, *272*, 365– 368, DOI: 10.1086/16130
- Irikura, K. K.; Goddard, W. A., III; Beauchamp, J. L. Prospects for the Involvement of Transition Metals in the Chemistry of Diffuse Interstellar Clouds: Formation of FeH^+ by Radiative Association. *Int. J. Mass Spectrom.* **1990**, *99*, 213– 222, DOI: 10.1016/0168-1176(90)85031-v
- Serra, G.; Chaudret, B.; Saillard, Y.; Le Beuze, A.; Rabaa, H.; Ristorcelli, I.; Klotz, A. Organometallic Chemistry in the Interstellar Medium. I-Are Organometallic Reactions Efficient Processes in Astrochemistry?. *Astron. Astrophys.* **1992**, *260*, 489– 493
- Boissel, P. Organometallic Chemistry and the Interstellar Medium: Experimental Evidence of Coordination between Metal Cations and Polycyclic Hydrocarbons in the Gas Phase. *Astron. Astrophys.* **1994**, *285L*, 33– 36
- Petrie, S.; Becker, H.; Baranov, V.; Bohme, D. K. Association Reactions of Fe^+ with Hydrocarbons: Implications for Dense Interstellar Cloud Chemistry. *Astrophys. J.* **1997**, *476*, 191– 198, DOI: 10.1086/303596
- Petrie, S.; Dunbar, R. C. Radiative Association Reactions of Na^+, Mg^+, and Al^+ with Abundant Interstellar Molecules. Variational Transition State Theory Calculations. *J. Phys. Chem. A* **2000**, *104*, 4480– 4488, DOI: 10.1021/jp993485q
- Dunbar, R. C.; Petrie, S. Interstellar and Circumstellar Reaction Kinetics of Na^+, Mg^+, and Al^+ with Cyanopolyynes and Polyynes. *Astrophys. J.* **2002**, *564*, 792– 802, DOI: 10.1086/324196
- Böhme, D. K. Multiply-Charged Ions and Interstellar Chemistry. *Phys. Chem. Chem. Phys.* **2011**, *13*, 18253– 18263, DOI: 10.1039/c1cp21814j

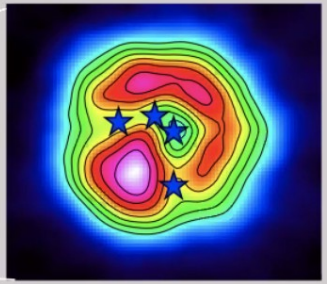

Dr. Ankan Das
Dr. Kotomi Taniguchi
Dr. Takashi Shimonishi
View
You are viewing Dr. Kotomi Taniguchi's screen
View Options
Carbon-Chain Chemistry around Massive Young Stellar Objects
Kotomi Taniguchi
National Astronomical Observatory of Japan (NAOJ)
Acknowledgement
Eric Herbst (UVA), Paola Caselli (MPE), Shigehisa Takakuwa (Kagoshima Univ.), Masao Saito, Fumitaka Nakamura (NAOJ), Tien-Hao Hsieh (MPE), Kazuhito Dobashi (Tokyo Gakugei Univ.), Tomomi Shimoikura (Otsuma Women's Univ.), Liton Majumdar (NISER), Zhi-Yun Li (UVA), Jonathan C. Tan (UVA/Chalmers)
Unmute
Start Video
Participants
39
Q&A
Share Screen
Chat
Raise Hand
Settings
More
Leave

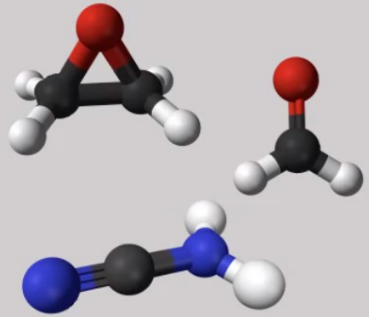

Dr. Dipen Sahu
Dr. Takashi Shimonishi
Dr. Divita Gupta
Connecting to audio
Prof. B. N. Rajasekhar
Prof. B. N. Rajasekhar
Dr. Zhao Wang
Dr. Zhao Wang
View
You are viewing Dr. Dipen Sahu's screen
View Options
DIG astrochemistry conference
Nov. 17-18, Online
Physical Research Laboratory (PRL)
Density Structure of Centrally Condensed Prestellar Cores from Multiscale Observations
Dipen Sahu
Ramanujan Fellow, PRL, India
In collaboration with: Sheng-Yuan Liu (ASIAA), Tie-Liu (SHAO), Doug Johnstone (HAA), Neal J. Evans II (UT) Naomi Hirano, Chin-Fei Lee(ASIAA), Ken'ichi Tatematsu (NRO, NAOJ), Kee-Tae Kim (KASI), and the ALMASOP team
Unmute
Start Video
Participants
56
Q&A
Share Screen
Chat
Raise Hand
Settings
More
Leave


Dr. Prasanta Gorai
Andrés Megías
Álvaro López-Gallifa
ARIJIT ROY
Dr. Tien-Hao Hsieh
View
You are viewing Dr. Prasanta Gorai's screen
View Options
Astrochemical Model of Massive Protostellar Core Envelopes
Prasanta Gorai
Collaborators: Prof. Jonathan C. Tan, Dr. Yichen Zhang
CHALMERS Initiative on Cosmic Origins
Cosmic Origins Postdoctoral Fellow
CHALMERS
UNIVERSITY OF TECHNOLOGY
DIG Astrochemistry Conference-Day 2 (Virtual)
18th November 2022
Unmute
Start Video
Participants
56
Q&A
Share Screen
Chat
Raise Hand
Settings
More
Leave



Comparative study of the chemical composition of G31.41 with different phases of the star formation





Álvaro López-Gallifa

Center of Astrobiology (CAB), CSIC-INTA

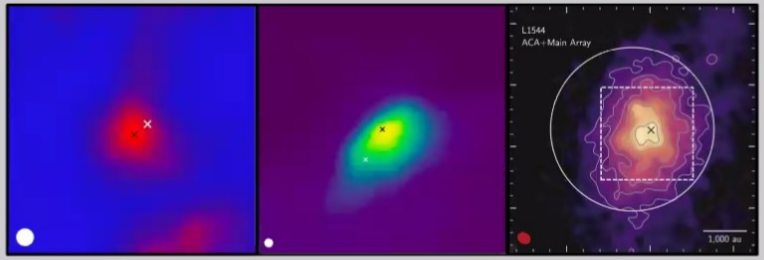
This project has received funding from the Comunidad de Madrid through the Atracción de Talento Investigador (Doctores con experiencia) Grant (COOL: Cosmic Origins Of Life; 2019-T1/TIC-15379) and from the Agencia Estatal de Investigación (AEI) through the Ramón y Cajal programme (grant RYC2020-029387-I) financed by MCIN/AEI /10.13039/501100011033.

Dr. Takashi Shimonishi | Andrés Megías | Dr. Heidy M. Quiti[illegible]n-Lara | Dr. Christine Joblin | Prof. Cristina Puzzarini

You are viewing Andrés Megías's screen | View Options

Chemical complexity in starless and pre-stellar cores

Andrés Megías,[1] Izaskun Jiménez-Serra,[1] Jesús Martín-Pintado,[1] Anton I. Vasyunin,[2]
Silvia Spezzano,[3] Paola Caselli,[3] Giuliana Cosentino,[4] Serena Viti[5]



[1] Centro de Astrobiología (CAB), CSIC-INTA, Ctra. de Torrejón a Ajalvir, km 4, 28850, Torrejón de Ardoz, Spain
[2] Ural Federal University, Kuybysheva st. 48, 620002, Ekaterinburg, Russian Federation
[3] Max Planck Institute for Extraterrestrial Physics, Giessenbachstrasse 1, 85748, Garching, Germany
[4] Chalmers University of Technology, SE41296, Gothenburg, Sweden
[5] Leiden Observatory, Leiden University, PO Box 9513, NL-2300 RA, Leiden, The Netherlands

UNIÓN EUROPEA
AGENCIA ESTATAL DE INVESTIGACIÓN
MINISTERIO DE CIENCIA E INNOVACIÓN

CENTRO DE ASTROBIOLOGÍA · CAB
ASOCIADO AL NASA ASTROBIOLOGY PROGRAM
CSIC

November 18, 2022

Dust, Ice and Gas Astrochemistry

Unmute | Start Video | Participants 57 | Q&A | Polls | Share Screen | Chat | Record | Raise Hand | Settings | More | End

Dr. Takashi Shimonishi | Dr. Kei Tanaka | Shubhadip Chakrabort... | Dr. Heidy M. Quiti[illegible]n-Lara | Dr. Christine Joblin

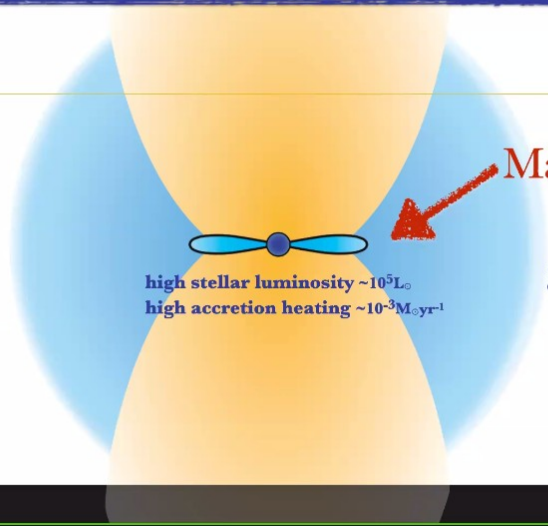
Shubhadip Chakraborty (He/Hi... | Dr. Heidy M. Quiti[illegible]n-Lara | Dr. Christine Joblin

You are viewing Dr. Kei Tanaka's screen | View Options

Massive Protostellar Disks as a Hot Laboratory

Kei E. I. Tanaka (CU Boulder/NAOJ)

Y. Zhang (Virginia), R. Yamamuro (Tokyo Tech), Z. Zhang (RIKEN), A. Ginsburg (Florida), K. Taniguchi (NAOJ), K. Motogi (Yamaguchi), T. Hirota (NAOJ), N. Sakai (RIKEN), J. Bally (CU Boulder), S. Okuzumi (Tokyo Tech), and more



Massive protostellar disks are hot!
an excellent target to study
gas and dust at >100-1000K

Unmute | Start Video | Participants 58 | Q&A | Polls | Share Screen | Chat | Record | Raise Hand | Settings | More | End

Dr. Ankan Das | Prof. Liv Hornekaer | Dr. Christine Joblin | Dr. Sergio Ioppolo | Prof. Cristina Puzzarini

You are viewing Dr. Christine Joblin's screen | View Options

Modeling the aromatic infrared bands in the JWST era

C. Joblin, K. Demyk, D. Toublanc, O. Berne
S. Chakraborty, S. Cavo, Q Sanfeliu, E. Ounesli, C. Bastelica, L. von Roetel
J.-M. Glorian, A. Pérignon
Institut de Recherche en Astrophysique et Planétologie
Université de Toulouse III, CNRS, CNES

G. Mulas
INAF, Osservatorio Astronomico di Cagliari & IRAP, Toulouse

A. Simon*, M. Rapacioli*, P. Cassam-Chenaï#
*LCPQ - Université de Toulouse III, CNRS
#LJAD- Université Côte d'Azur, CNRS

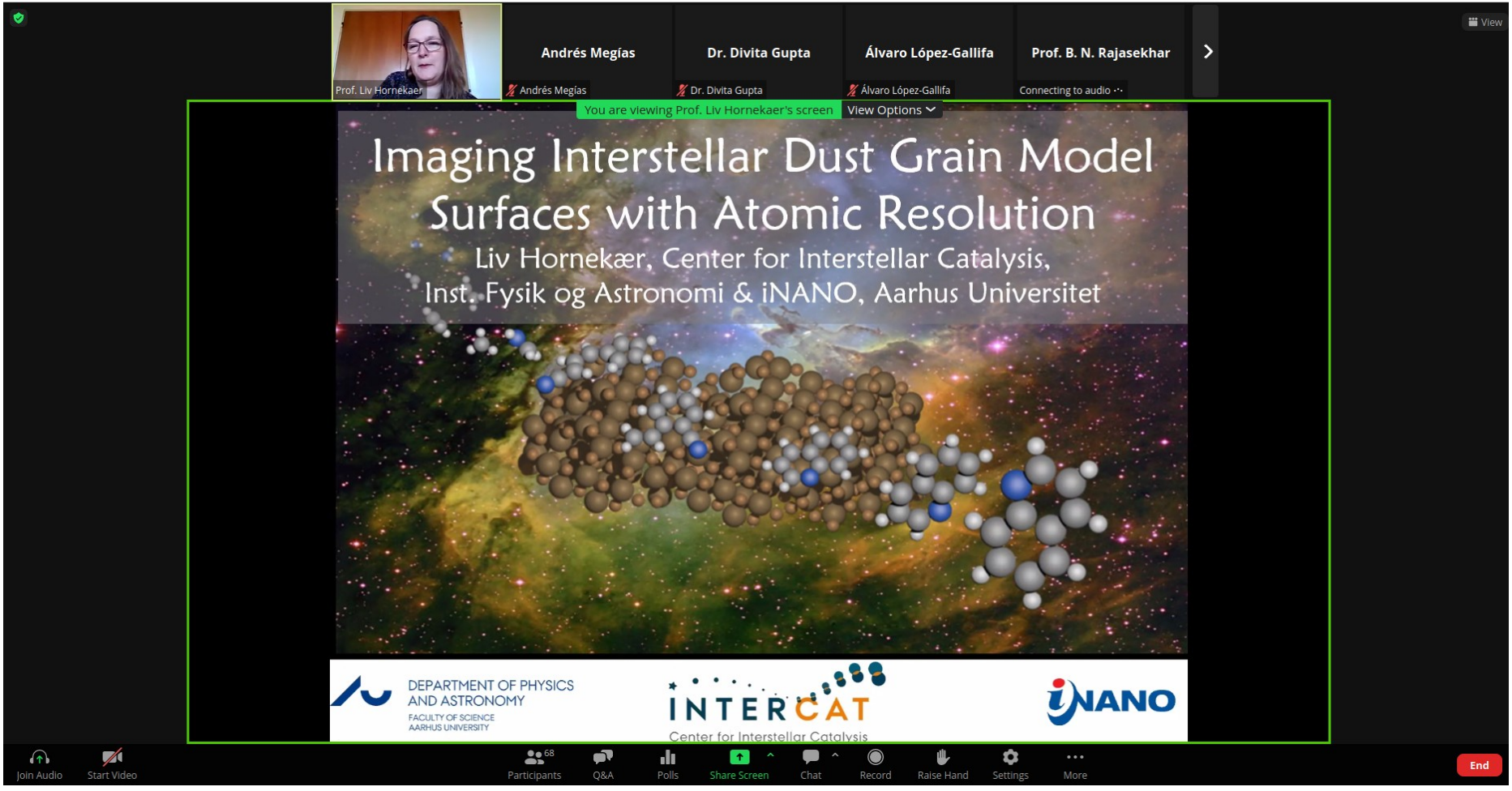
erc

GSO OBSERVATOIRE VIRTUEL GRAND SUD OUEST | cnrs dépasser les frontières | OAC | Osservatorio Astronomico di Cagliari | INAF | nanoCOSMOS | UNIVERSITÉ TOULOUSE III PAUL SABATIER | pcmi | cnes CENTRE NATIONAL D'ÉTUDES SPATIALES

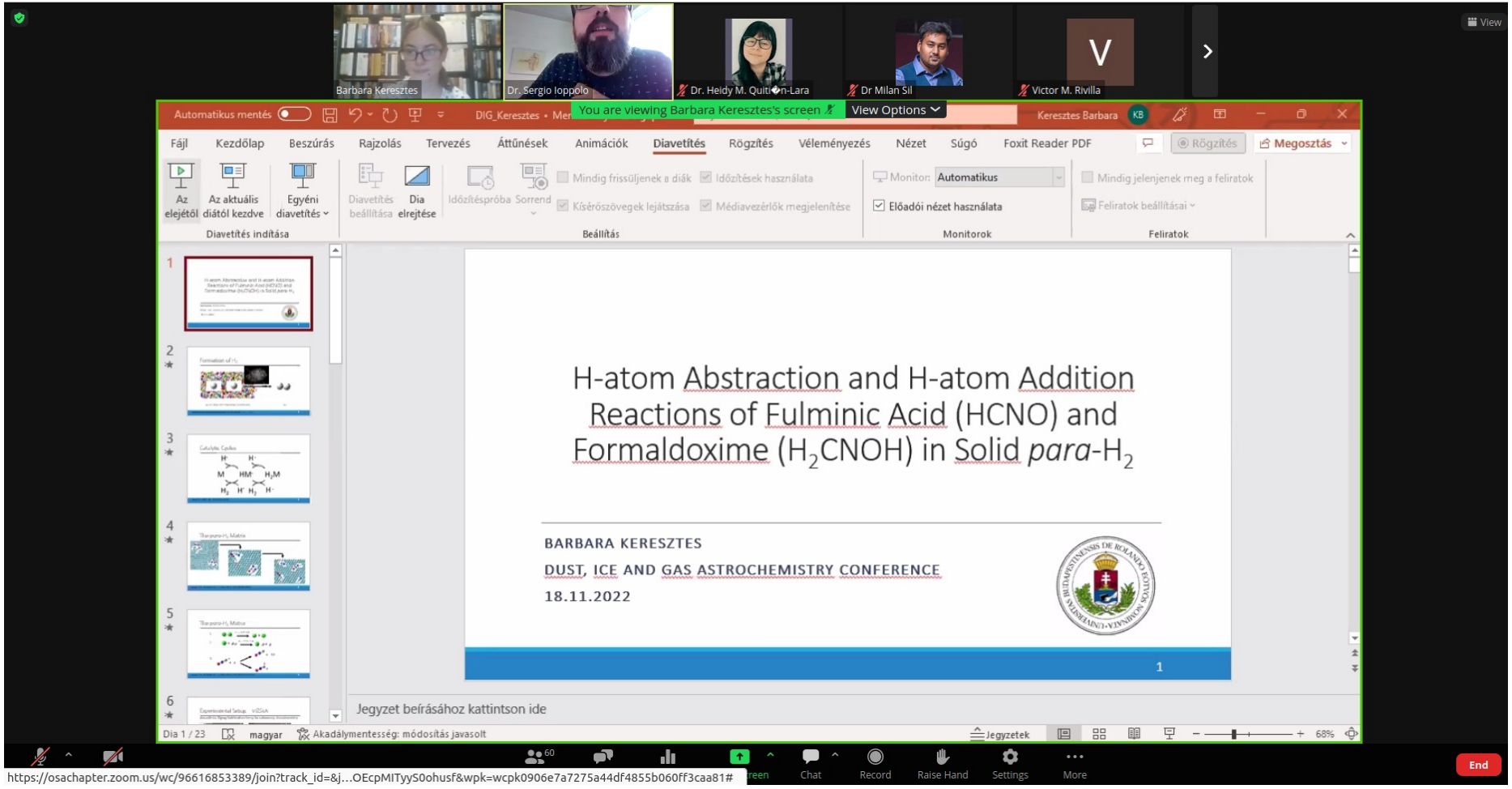
DIG Astrochemistry
Virtual, 17-18/11/2022

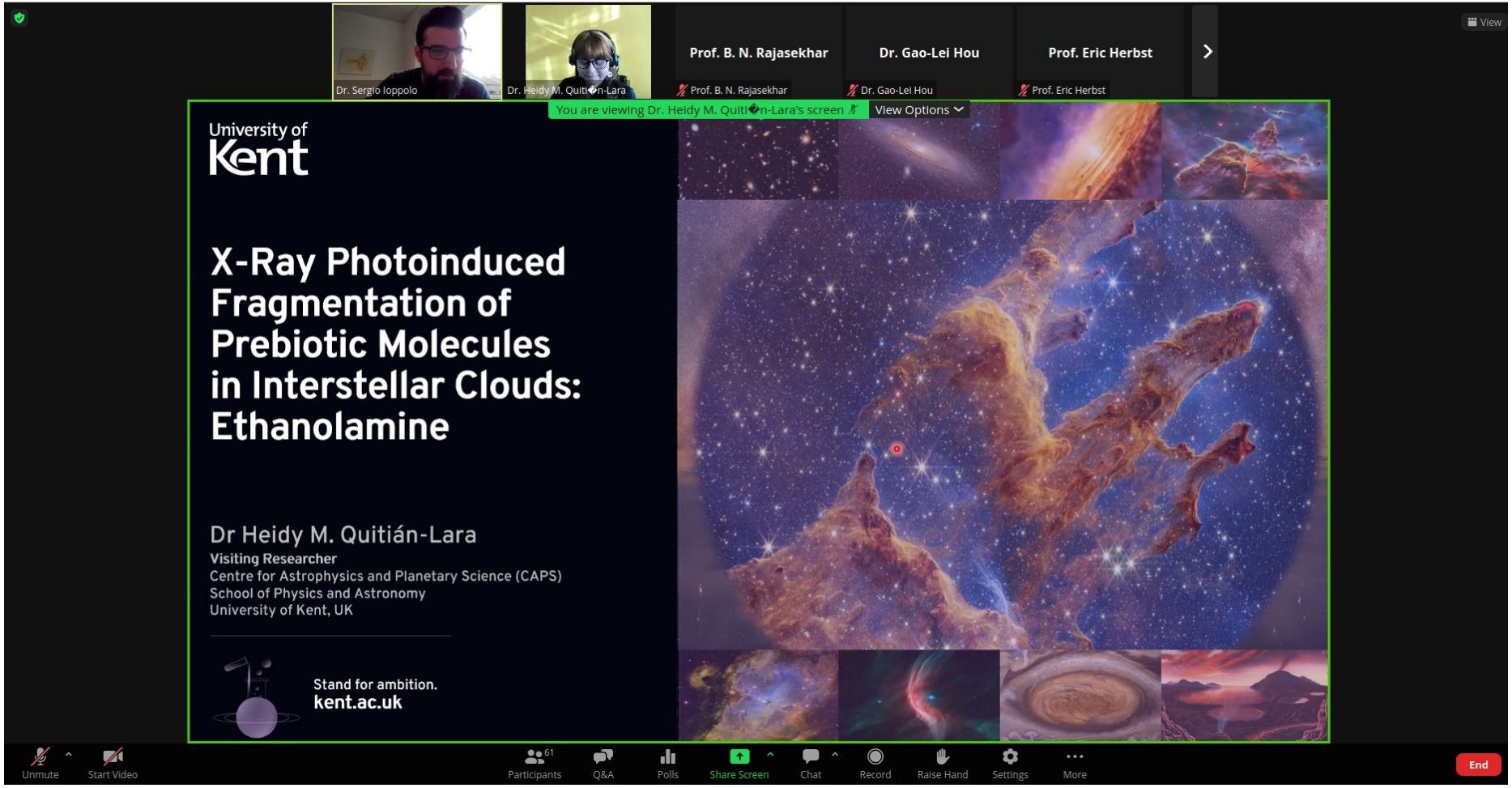
Unmute | Start Video | Participants 57 | Q&A | Polls | Share Screen | End

https://osachapter.zoom.us/wc/96616853389/join?track_id=&j...OEcpMITyyS0ohusf&wpk=wcpk0906e7a7275a44df4855b060ff3caa81#


Prof. Liv Hornekaer
Andrés Megías
Dr. Divita Gupta
Álvaro López-Gallifa
Prof. B. N. Rajasekhar
Andrés Megías
Dr. Divita Gupta
Álvaro López-Gallifa
Connecting to audio
You are viewing Prof. Liv Hornekaer's screen
View Options
Imaging Interstellar Dust Grain Model Surfaces with Atomic Resolution
Liv Hornekær, Center for Interstellar Catalysis,
Inst. Fysik og Astronomi & iNANO, Aarhus Universitet
DEPARTMENT OF PHYSICS AND ASTRONOMY
FACULTY OF SCIENCE
AARHUS UNIVERSITY
INTERCAT
Center for Interstellar Catalysis
iNANO
Join Audio
Start Video
Participants
68
Q&A
Polls
Share Screen
Chat
Record
Raise Hand
Settings
More
End


Dr. Kinsuk Acharyya
Dr. Sergio Ioppolo
Dr. Divita Gupta
Dr Milan Sil
Venkata Lakshmi
Venkata Lakshmi
You are viewing Dr. Divita Gupta's screen
View Options
High-resolution spectroscopy of astrophysically relevant hydrocarbon ions
Divita Gupta, Universität zu Köln
Divita Gupta
DIG-Astrochemistry Meeting 2022
SFB 956
Cologne Bonn
65
Chat
Record
Raise Hand
Settings
More
End
https://osachapter.zoom.us/wc/96616853389/join?track_id=&j...OEcpMITyyS0ohusf&wpk=wcpk0906e7a7275a44df4855b060ff3caa81#


Barbara Keresztes
Dr. Sergio Ioppolo
Dr. Heidy M. Quiti◆n-Lara
Dr Milan Sil
Victor M. Rivilla
You are viewing Barbara Keresztes's screen
View Options
H-atom Abstraction and H-atom Addition Reactions of Fulminic Acid (HCNO) and Formaldoxime (H_2CNOH) in Solid *para*-H_2
BARBARA KERESZTES
DUST, ICE AND GAS ASTROCHEMISTRY CONFERENCE
18.11.2022
1
Jegyzet beírásához kattintson ide
https://osachapter.zoom.us/wc/96616853389/join?track_id=&j...OEcpMITyyS0ohusf&wpk=wcpk0906e7a7275a44df4855b060ff3caa81#


Dr. Sergio Ioppolo
Dr. Heidy M. Quiti@n-Lara
Prof. B. N. Rajasekhar
Dr. Gao-Lei Hou
Prof. Eric Herbst
View
You are viewing Dr. Heidy M. Quiti@n-Lara's screen
View Options
University of Kent
X-Ray Photoinduced Fragmentation of Prebiotic Molecules in Interstellar Clouds: Ethanolamine
Dr Heidy M. Quitián-Lara
Visiting Researcher
Centre for Astrophysics and Planetary Science (CAPS)
School of Physics and Astronomy
University of Kent, UK
Stand for ambition.
kent.ac.uk
Unmute
Start Video
Participants
61
Q&A
Polls
Share Screen
Chat
Record
Raise Hand
Settings
More
End

Synthetic Approaches to Complex Organic Molecules in the Cold Interstellar Medium

Eric Herbst

Departments of Chemistry and Astronomy

University of Virginia

Rotational spectroscopy and chemical reactivity in Astrochemistry: experiment and theory

Cristina Puzzarini
S. Alessandrini - L. Bizzocchi - M. Melosso
Dept. Chemistry "Giacomo Ciamician" - University of Bologna

DIG (Dust, Ice and Gas) Astrochemistry
November 17-18, 2022

ROTATIONAL AND COMPUTATIONAL SPECTROSCOPY

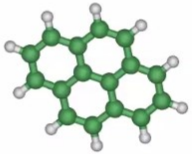
Dr. Ankan Das | Dr. Mathias Rapacioli | Dr. Zhao Wang | Dr. Robin Garrod | Prof. Eric Herbst

You are viewing Dr. Mathias Rapacioli's screen View Options

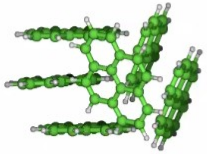
Large carbonaceous molecules and molecular clusters : Insights from theoretical modelling

M. Rapacioli

Laboratoire de Chimie et Physique Quantiques
CNRS, Toulouse, France



LCPQ



DIG
Astrochemistry meeting
17-18 Nov. 2022

Participants (60)

Panelists (37) | Attendees (23)

Find a participant

- Shivanshi Gupta (Host, Me)
- PRL OPTICS (Co-host)
- Dr. Ankan Das (Co-host)
- Dr. Ragav Ramachandran (Co-host)
- Dr. Takashi Shimonishi (Co-host)
- Dr. Bhalamurugan Sivaraman (Co-host)
- Dr. Robin Garrod (Co-host)
- Dr. Kotomi Taniguchi
- Dr. Prasanta Gorai
- Dr. Mathias Rapacioli
- Maria Murga
- Sergio Pilling
- Dr. Yao-Lun Yang (he/him)
- Surendra
- Giacomo Mulas
- Dr. Kenji Furuya
- Wafikul Khan
- Dr. Zhao Wang
- ARIJIT ROY

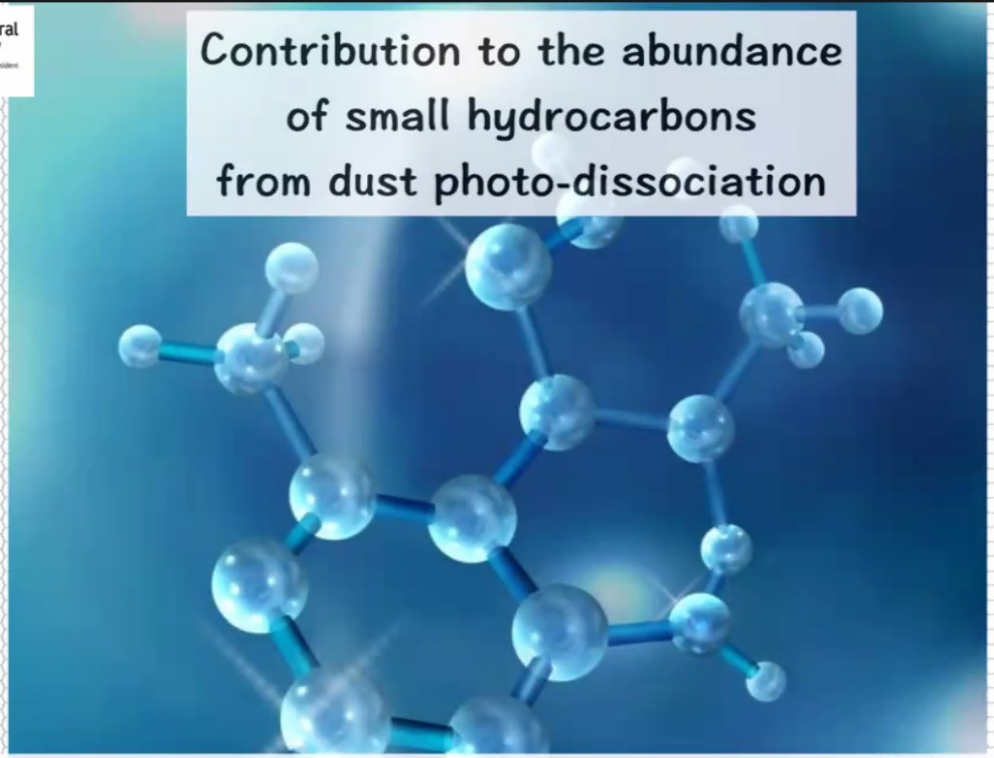
Invite | Mute All | More

Join Audio | Start Video | Participants | Q&A | Polls | Share Screen | Chat | Record | Raise Hand | Settings | More | End

Ural Federal University
named after the first President of Russia B.N.Yeltsin

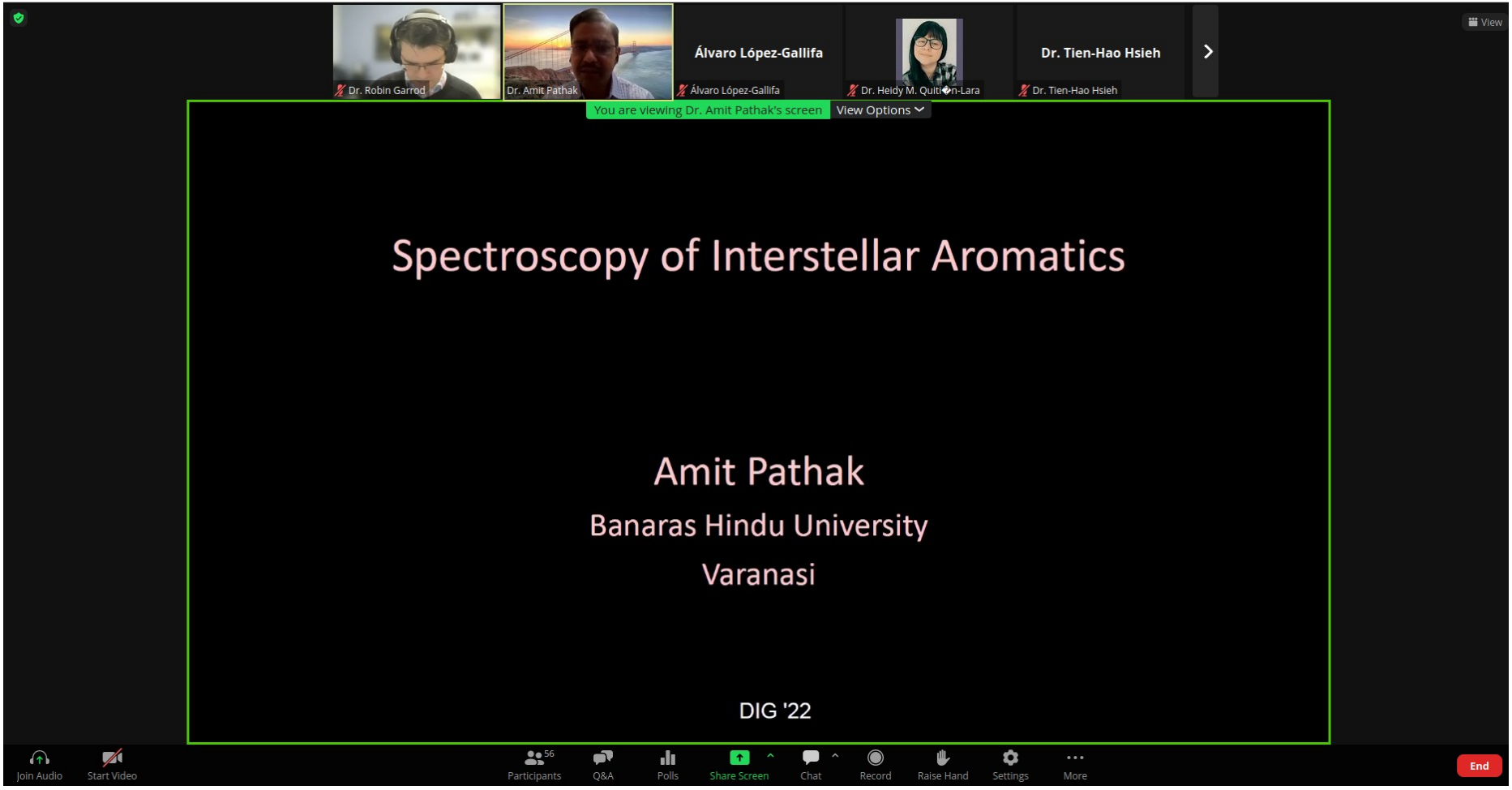
INASAN

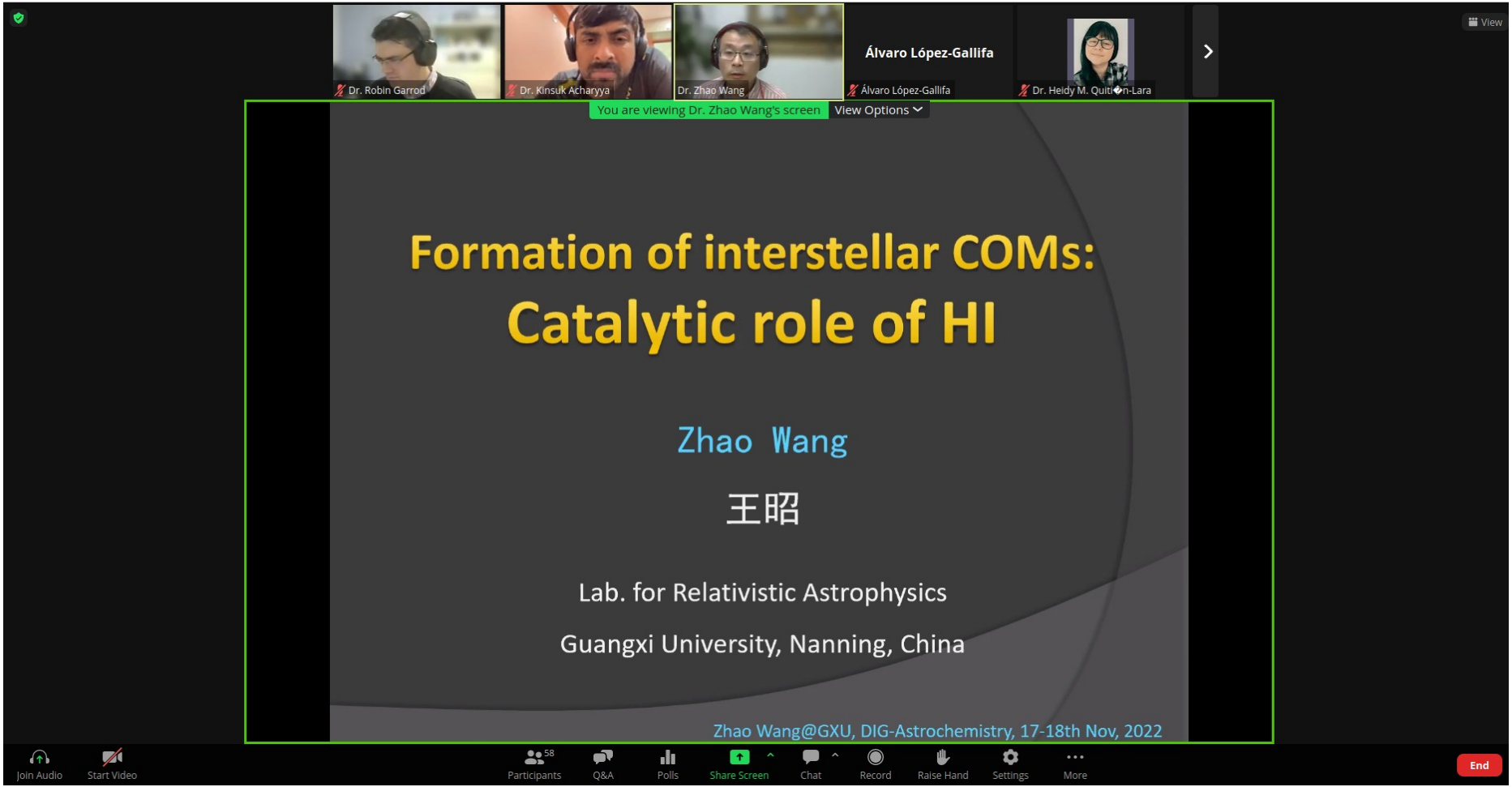
Contribution to the abundance of small hydrocarbons from dust photo-dissociation



M. Murga[1,2], A. Vasyunin[2], M. Kirsanova[1]

1. Institute of astronomy of Russian academy of Sciences, Russia
2. Ural Federal university, Ekaterinburg, Russia


Dr. Robin Garrod
Dr. Amit Pathak
Álvaro López-Gallifa
Álvaro López-Gallifa
Dr. Heidy M. Quiti
n-Lara
Dr. Tien-Hao Hsieh
Dr. Tien-Hao Hsieh
View
You are viewing Dr. Amit Pathak's screen
View Options
Spectroscopy of Interstellar Aromatics
Amit Pathak
Banaras Hindu University
Varanasi
DIG '22
Join Audio
Start Video
Participants
56
Q&A
Polls
Share Screen
Chat
Record
Raise Hand
Settings
More
End


Dr. Robin Garrod
Dr. Kinsuk Acharyya
Dr. Zhao Wang
Álvaro López-Gallifa
Álvaro López-Gallifa
Dr. Heidy M. Quiti
n-Lara
You are viewing Dr. Zhao Wang's screen
View Options
Formation of interstellar COMs:
Catalytic role of HI
Zhao Wang
王昭
Lab. for Relativistic Astrophysics
Guangxi University, Nanning, China
Zhao Wang@GXU, DIG-Astrochemistry, 17-18th Nov, 2022
Join Audio
Start Video
Participants
58
Q&A
Polls
Share Screen
Chat
Record
Raise Hand
Settings
More
End

Theoretical and observational study of PAHs up to ten hexagon rings

by

Karri Venkata Lakshmi PhD student
Project Associate-I Under ISRO RESPOND Project

Dr. Mahadevappa Naganathappa supervisor
GITAM (Deemed to be University), Hyderabad, India
swamimahadev25@gmail.com

Date: 18 Nov 2022