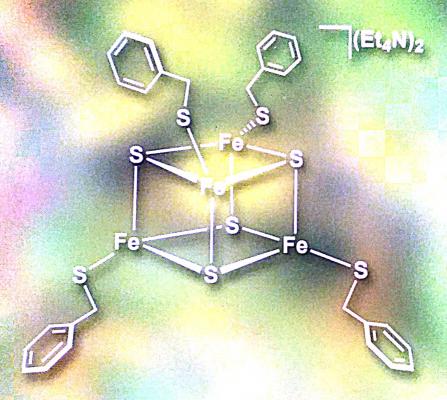


ournal of science education



Richard Hadley Holm \* Molecular Communication \*

A Journey Through the SSH Model \* Insect Migration \*

Nobel Prize in Physics 2022 \*

And as We Moved, We Embraced, and We Absorbed A Super-resolution-based Approach Pinasco's Proof of the Infinitude of Primes

Indian Academy of Sciences







# Resonance journal of science education

January 2023 Volume 28 Number 1



# **GENERAL ARTICLES**

17 **Richard Hadley Holm** September 24, 1933--February 15, 2021 R. N. Mukherjee



33 **Molecular Communication** 

A Nanotechnological Paradigm Vishwamittar, Priyanka Batra and Ribhu Chopra



55 **Exploring Ideas in Topological Quantum Phenomena** 

A Journey Through the SSH Model. 4 Anantha Hegde, Adarsh Kumar, Adhip Agarwala and Bhaskaran Muralidharan



71 **Going Places** 

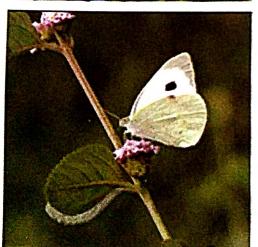
> Insect Migration Tabasum Akhter, Pawan Kumar and Sudeshna Mazumdar-Leighton



85 The Experiments That Led to the Nobel Prize in Physics 2022

Urbasi Sinha

117



And as We Moved, We Embraced, and We Absorbed A Narrative and Contextualization of the Work of Svante Pääb

Nobel Laureate in Physiology or Medicine 2022 Partha P. Majumder

A Super-resolution-based Approach for the Detection of 127 Covid-19 Infection From Chest X-ray Images Seema S. Bhat and Hanumantharaju M. C



### Classroom

Remarks on Pinasco's Proof of the Infinitude of Primes 149

Romeo Meštrovic

153

**Load Sensor Approach for Arduino-based Viscometer** 

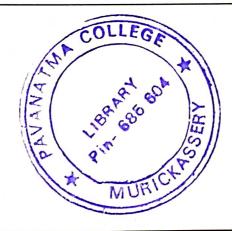
Latha. R, Vetrivelan. P, Geetha. S, Murthy K. N

**Research News** 

167

Nuclear Fusion: Breakthrough in Inertial Confinement

Indulekha Kavila



## **Front Cover**



The front cover displays the ChemDraw structure of Dick Holm's molecule published in PNAS USA, Vol.69, No.9, pp.2437–2441, 1972.

#### **Back Cover**



Richard Hadley Holm (1933–2021)

Illustration: Subhankar Biswas

## **DEPARTMENTS**



General Editorial

Editorial R. N. Mukherjee



Science Smiles

Ayan Guha

9

13

1

5

Article-in-a-Box Richard H. Holm:

Inorganic and

**Bioinorganic Chemistry** 

R. N. Mukherjee

Crossword

171

Birds in the Backyard

T N C Vidya Sandeep Shroff

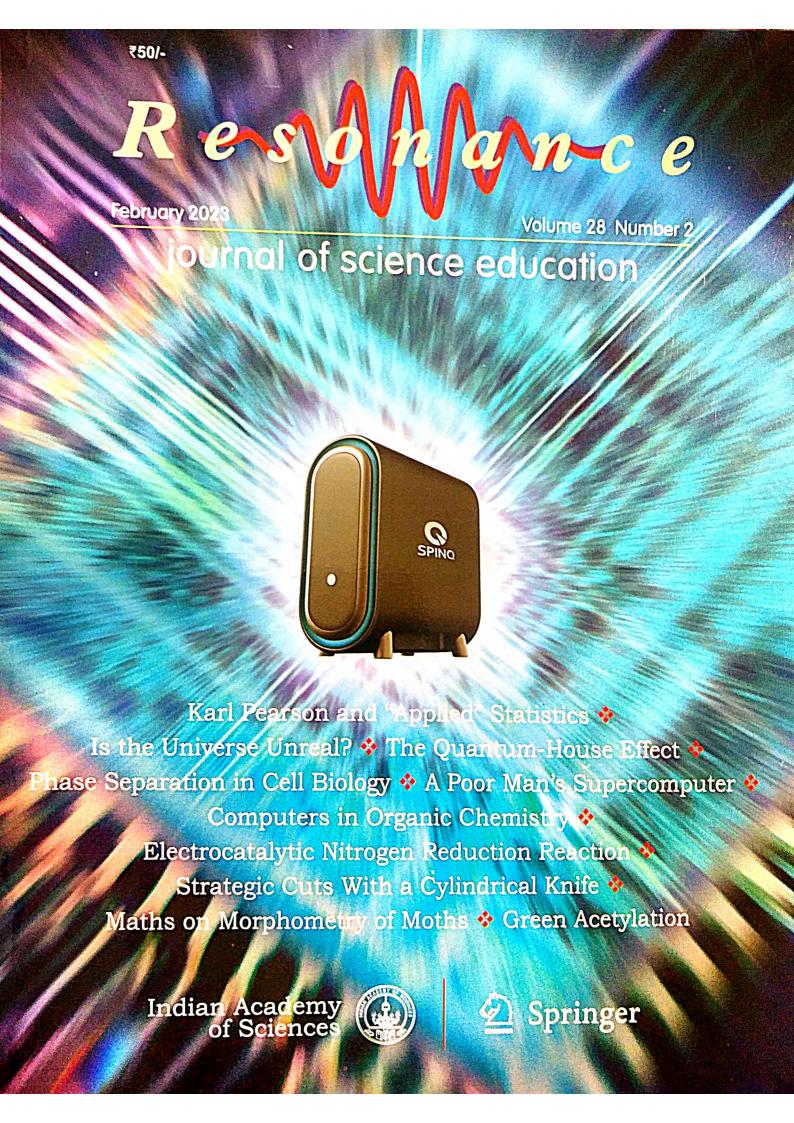
Mitali Saha Deb

Follow us

Facebook:

@Resonance.IASc.Bng

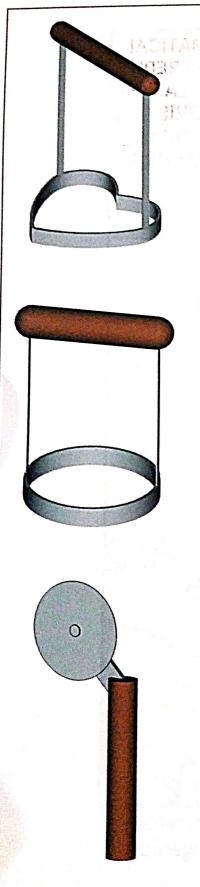
Twitter: @IAScResonance



#### journal of science education Resonance

February 2023 Volume 28 Number 2

293 **GENERAL ARTICLES** Karl Pearson and "Applied" Statistics 183 Radhendushka Srivastava Is the Universe Unreal as per Quantum Mechanics? 191 Jayanth Vyasanakere The Quantum-House Effect and Its Demonstration 199 on SpinQ Gemini Tamás Varga An Introduction to Phase Separation in Cell Biology 229 Kripa Gowrishankar and Sravanti Uppaluri 247 Beowulf Cluster - A Poor Man's Supercomputer V. Rajaraman 255 **Computers in Organic Chemistry** Jayashree Nagesh 279 Electrocatalytic Nitrogen Reduction Reaction (NRR) A Probable Alternative to Haber–Bosch Process (HBP) 0 Jaydeep Basu and Sanjib Ganguly 293 Strategic Cuts With a Cylindrical Knife Making Solids Bounded by Cylindrical Surfaces Rishav Bhattacharjee and Jyotirmoy Sarkar 313 M³=Maths on Morphometry of Moths Monalisa Paul





Classroom

**Green Acetylation of Primary** 

**Aromatic Amines** 

Sharda Pasricha and T. M. Rangarajan



Face to Face

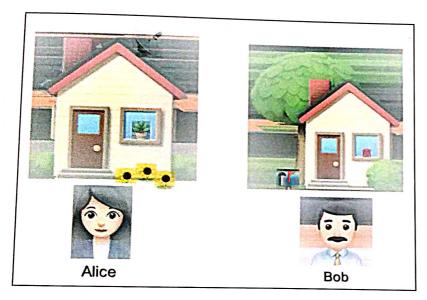
A Peek Into the Life and Works of the

Raman Chair, 2020

Harold Eliot Varmus in Conversation with

Partha P. Majumder

199



## **Front Cover**



The front cover features SpinQ Gemini, a 2-qubit liquid-state NMR desktop quantum computer.

## **Back Cover**



Karl Pearson (1856–1936)

Illustration: Subhankar Biswas

### **DEPARTMENTS**

~~W~~

**Editorial** 

325

333

Vivek Borkar

175



**Science Smiles** 

Ayan Guha

177

Article-in-a-Box

Karl Pearson (1857-1936)

Vivek S. Borkar

Crossword

343

181

Life Under Water

Sujata Deshpande

Ronak Waghe

Follow us

Facebook:

@Resonance.IASc.Bng

Twitter: @IAScResonance

~\\\\\~