

CURRENT SCIENCE

345
AB

Volume 116 Number 1

10 January 2019

6 **In this issue**

GUEST EDITORIAL

- 7 **The simple matter of sustainability**
Stephen A. Matlin, Henning Hopf, Alain Krief and Goverdhan Mehta

CORRESPONDENCE

- 9 **Revenue generated by CSIR through research projects**
Gangan Prathap

NEWS

- 10 **R. A. Mashelkar wins the TWAS-Lenovo Science Prize**
S. Priya
- 11 **Quantum chaos, dynamical systems and Schrödinger equations and quantum unique ergodicity**
Yves Colin de Verdiere
- 12 **Wading through black carbon aerosols, climate and sustainability**
K. Krishnamoorthy
- 14 **Understanding the role of molecular motors in living cells: an odyssey from physics to biology**
Siddhesh S. Kamat
- 16 ***Much More than Moore* – a journey from VLSI to disease biomarkers**
S. A. Shivashankar
- 18 **A short note on Sendhil Mullainathan's contributions to development economics**
Bindu Ananth
- 20 **Overhauling the communicational inconsistencies in Indian science**
S. Badrinarayan, Bhavisha P. Sheth, Kavita Pal, Kshama Lakshman, Palatty Allesh Sinu, K. Sri Manjari, Viswas Konasagara Nagaleekar and Wairokpam Premi Devi
- 22 **Science Last Fortnight**

COMMENTARY

- 26 **The concept of measuring happiness and how India can go the Nordic Way**
Sangeeta Bhattacharyya, R. Roy Burman and Sudipta Paul

SCIENTIFIC CORRESPONDENCE

- 29 **Temporal shift in timing of breeding of European starling (*Sturnus vulgaris* Linnaeus) population**
Zdravko Dolenc
- 30 **Simple estimates for optimization of potassium nutrition in vineyards**
Vinod C. Naraboli, S. Srikanth, Ajay K. Bhardwaj, Shankar Meti, Ashok S. Alur and Mavinakoppa S. Nagaraja
- 32 ***Brainea insignis* (Hook.) J.Sm. – a conservation priority fern of North East India**
B. S. Kholia, S. Sharma and B. K. Sinha



GENERAL ARTICLES

- 35 **A Granger causality test of the causal relationship between the number of editorial board members and the scientific output of universities in the field of chemistry**
Xing Wang
- 40 **Perspectives from India on geoengineering**
Vikram Mathur and Aparna Roy

REVIEW ARTICLES

- 47 **Intricacies in the approval of radiopharmaceuticals – regulatory perspectives and the way forward**
Sandeep Sharma, Sanyog Jain, Ashish Baldi, Rajesh K. Singh and Rakesh Kumar Sharma
- 56 **Rainfall estimation techniques over India and adjoining oceanic regions**
Anoop Kumar Mishra and Mohammad Rafiq

RESEARCH ARTICLES

- 69 **Neuroanatomical correlates of perceiving the intensity and pleasantness of intense saltiness in healthy subjects**
Andy Wai Kan Yeung
- 75 **Regression equations for estimating tree volume and biomass of important timber species in Meghalaya, India**
Krishna Giri, Rajiv Pandey, R. S. C. Jayaraj, R. Nainamalai and Subhash Ashutosh
- 82 **Biophysical performance of different multipurpose trees species in Jharkhand, India**
Bikash Das, Pradip Kumar Sarkar, Neelam Kumari, P. Dey, A. K. Singh and B. P. Bhatt
- 89 **Impact of ultraviolet-B radiation on growth and biochemical composition of *Botryococcus braunii* Kutz.**
Chidambaram Kurinjimalar, Ganapathy Kavitha, Rangaraja Thevanathan, Govindaswamy Kulandaivelu and Ramasamy Rengasamy
- 96 **Coal–rock interface recognition based on permutation entropy of LMD and supervised Kohonen neural network**
Yong Li, Gang Cheng, Xihui Chen and Chang Liu

RESEARCH COMMUNICATIONS

- 104 **Metal constituents of e-waste black powder and its potential utilization**
Pawan Kumar Bharti, R. K. Singh, Raju Joshi, Shambhu Thakur and A. K. Tyagi
- 108 **Development of web-based combine harvester custom-hiring model for rice–wheat cropping system**
Roaf Ahmad Parray, Indra Mani, Adarsh Kumar and Tapan Kumar Khura
- 112 **Carbon sequestration potential of *Hardwickia binata* Roxb. based agroforestry in hot semi-arid environment of India: an assessment of tree density impact**
Dipak Kumar Gupta, R. K. Bhatt, Keerthika A., M. B. Noor mohamed, A. K. Shukla and B. L. Jangid
- 116 **Myco-potash solubilizers**
B. K. Parida, R. V. Vyas, Y. K. Jhala² and S. Dasgupta
- 121 **Effects of small rainfall events on *Haloxylon ammodendron* seedling establishment in Northwest China**
Guohua Wang, Qianqian Gou and Wenzhi Zhao

- 127 **Assessment of ergonomic parameters of coconut climbing devices for women**
Bini Sam, Hameeda Bindu Vahab and S. Regeena

BOOK REVIEWS

- 134 **Third Thoughts**, Steven Weinberg; *reviewed by* C. P. Rajendran
- 135 **Methods in Stream Ecology, Third Edition – Volume 2: Ecosystem Function**.
Gary A. Lamberti and F. Richard Hauer (eds); *reviewed by* T. V. Ramachandra
-



- ◀ **COVER.** Periodic table of the chemical elements for the International Year (2019), illustrating limitations in element supplies. See page 7.

Indexed in CURRENT CONTENTS/GEODASE/CHEMICAL ABSTRACTS/IndMED/SCOPUS/
WEB OF SCIENCE

