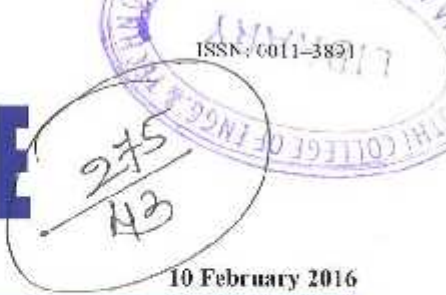


CURRENT SCIENCE



Volume 110 Number 3

10 February 2016

282 In this issue

GUEST EDITORIAL

- 283** Are volcanic eruptions causing the current global warming?
G. Bala

CORRESPONDENCE

- 285** Waste management: new challenge after the recent earthquake in Nepal, Daya Gautam and Til Bahadur Chhetri ■ **286** Citation of papers vis-à-vis quality of research in agricultural sciences, B. S. Dhillon and T. S. Thind ■ **287** Information and communication technology for effective integrated pest management, S. Vennila ■ **288** CSIR in SIR 2015, Gangan Prathap

NEWS

- 290** Awareness and capacity building in carbon capture and utilization, Malti Goel

RESEARCH NEWS

- 292** From a benchtop microscope to a pocket microscope
Bhagya Gupta, Vishal Dubey, Rakesh Kumar, Ramendra Lal Mukherjee and Rajib Bandopadhyay

OPINION

- 294** Enhancing the efficacy of the 'DBT and DST Open Access Policy'
Praveen Chaddah

SCIENTIFIC CORRESPONDENCE

- 296** Modern pollen rain in Kedarnath: implications for past vegetation and climate
Ratan Kar, Ruchika Bajpai and Kriti Mishra
- 299** *In situ* occurrence of *Vertebraria* roots in the Raniganj Formation of Singrauli Coalfield and its palaeoecological significance
Kamal Jeet Singh, Anju Saxena and Shreerup Goswami
- 302** Application of DInSAR technique for post-earthquake land deformation mapping of Eastern Nepal
Shweta Sharma, Y. S. Rao, Ajai and A. K. Mathur
- 304** Secondary craters detection from Mini-SAR for lunar surface age dating
Kedovikho Yhoshii, R. S. Chatterjee and P. K. Champati Ray

GENERAL ARTICLE

- 307** Research competitiveness of Indian institutes of science education and research
Tanu Solanki, Ashraf Uddin and Vivek Kumar Singh

RESEARCH ACCOUNT

- 311** Agricultural biotechnology and crop productivity: macro-level evidences on contribution of *Bt* cotton in India
Shivendra Kumar Srivastava and Deepthi Kolady



REVIEW ARTICLES

- 320 **Role of soil physical properties in soil health management and crop productivity in rainfed systems—II. Management technologies and crop productivity**
A. K. Indoria, K. L. Sharma, K. Sammi Reddy and Ch. Srinivasa Rao
- 329 **Conversion of biomass-generated syngas into next-generation liquid transport fuels through microbial intervention: potential and current status**
Dipti Verma, Ashish Singla, Banwari Lal and Priyangshu M. Sarma

RESEARCH ARTICLES

- 337 **Is gamma irradiation as a secondary sterilization procedure required for decellularized xenogenic tissue material?**
S. Guhathakurta, V. Balasubramanian, B. V. R. Tata and S. Ponraju
- 345 **Assessing climate change impacts on forest ecosystems for landscape-scale spatial planning in Nepal**
Gokarna Jung Thapa, Eric Wikramanayake, Shant Raj Irawali, Judy Oglethorpe and Ramesh Adhikari
- 353 **Effect of sandblasting, annealing and hydrophobic treatment on the nano-mechanical and corrosion behaviour of $n\text{-TiO}_2$ -coated 316L stainless steel**
Zaki Ahmad, Faheemuddin Patel, Naila Riaz Mastoi and Ayesha Saddiqa
- 363 **Sediment pathways and emergence of Himalayan source material in the Bay of Bengal**
K. S. Krishna, M. Ismaiel, K. Srinivas, D. Gopala Rao, J. Mishra and D. Saha
- 373 **A comparative study on application of time series analysis for traffic forecasting in India: prospects and limitations**
Kartikeya Jha, Nishita Sinha, Shriniwas S. Arkatkar and Ashoke K. Sarkar

RESEARCH COMMUNICATIONS

- 386 **High cadmium contamination at the gateway to Sundarban ecosystem driven by Kolkata metropolitan sewage in India**
Anirban Akhand, Abhra Chanda, Sourav Das, Pranabes Sanyal and Sugata Hazra
- 392 **Cr(VI) removal from synthetic textile effluent using *Tamarindus indica* bark: a kinetic and thermodynamic study**
Sudesh and Varsha Goyal
- 399 **Chromium toxicity to tomato (*Lycopersicon esculentum* Mill) susceptible to *Fusarium* wilt pathogen**
Saba Kurshid, Anna Shoaib and Arshad Javaid
- 405 **Rice (*Oryza sativa* L.) yield gap using the CERES-rice model of climate variability for different agroclimatic zones of India**
P. K. Singh, K. K. Singh, L. S. Rathore, A. K. Baxla, S. C. Bhan, Akhilesh Gupta, G. B. Gohain, R. Balasubramanian, R. S. Singh and R. K. Mall
- 414 **A study on general allometric relationships developed for biomass estimation in regional scale taking the example of *Tectona grandis* grown in Bundelkhand region of India**
D. Deb, A. Ghosh, J. P. Singh and R. S. Chaurasia
- 419 **Evidence of wildfires in the Late Permian (Changhsinghian) Zewan Formation of Kashmir, India**
André Jasper, Dieter Uhl, Deepa Agnihotri, Rajni Tewari, Sundeep K. Pandita, José Rafael Wanderley Benicio, Etienne Fabbrin Pires, Átila Augusto Stock Da Rosa, Gulam D. Bhat and S. Suresh K. Pillai



- 424 **Soybean (*Glycine max*) microRNAs display proclivity to repress *Begomovirus* genomes**
Shunmugiah V. Ramesh, Girish K. Gupta and Syed M. Husain
- 429 **Rank-frequency analysis of characters in Garhwali text: emergence of Zipf's law**
Manoj Kumar Riyal, Nichil Kumar Rajput, Vinod Prasad Khanduri and Laxmi Rawat
- 434 **Life history fitness of giant ladybird predator (Coleoptera: Coccinellidae) of woolly aphids (Hemiptera: Aphididae) in varying prey densities from northeast India**
Basant K. Agarwala and Joydeb Majumder
- 438 **Variations in the abundance and diversity of insects in apple orchards of Kumaun, Western Himalaya, India**
Bhawana Kapkoti, Ravindra K. Joshi and Ranbeer S. Rawal

BOOK REVIEWS

- 444 **NANOPARTICLES for Catalysis, Energy and Drug Delivery**, Ramesh S. Chaugule and Anant R. Kapdi (eds), reviewed by G. D. Yadav
- 444 **Annual Review of Cell and Developmental Biology, 2014**, Randy Schekman, Larry Goldstein and Ruth Lehmann (eds), reviewed by Ramakrishnan Nagaraj
- 445 **Annual Review of Public Health 2015**, Jonathan E. Fielding, Ross C. Brownson and Lawrence W. Green (eds), reviewed by Mario Vaz
- 447 **Landscapes and Landforms of India**, Vishwas S. Kale (ed.), reviewed by L. S. Chamyal

PERSONAL NEWS

- 449 **Subramania Ranganathan (1934–2016)**, D. Balasubramanian



- ◀ COVER. Apple trees. See page 438 for an article on 'Variations in the abundance and diversity of insects in apple orchards of Kumaun, Western Himalaya, India'.

Indexed in CURRENT CONTENTS/GEOTitles/CHEMICAL ABSTRACTS/ILDMED/SCOPUS/
WEB OF SCIENCE