Trends in Biotechnology

January 2022, Volume 40, Number 1, pp. 1-136

	г
Science & Socie	LУ

The future of genome editing innovations in the EU

Stuart J. Smyth and Justus Wesseler

Forum

Emerging tools and strategies in cyanobacterial omics

Amit Srivastava and Pratyoosh Shukla

8 Harnessing lactic acid bacteria in synthetic microbial consortia

Jian-Ming Liu, Christian Solem, Ting Lu, and Peter Ruhdal Jensen

Opinion

12 Can dispersal be leveraged to improve microbial inoculant success?

William L. King and Terrence H. Bell

Reviews

22 Enzyme discovery and engineering for sustainable plastic recycling

Baotong Zhu, Dong Wang, and Na Wei

38 Advanced strategies and tools to facilitate and streamline microbial adaptive laboratory evolution

Yinan Wu, Aysha Jameel, Xin-Hui Xing, and Chong Zhang

60 (R)evolution-on-a-chip

Evgenios Bouzetos, Ketan Ashok Ganar, Enrico Mastrobattista, Siddharth Deshpande, and John van der Oost

77 Overcoming functional challenges in autologous and engineered fat grafting trends

Gretel S. Major, Jeremy W. Simcock, Tim B.F. Woodfield, and Khoon S. Lim

93 Bioinspired materials and technology for advanced cryopreservation

Mengjia Dou, Chennan Lu, and Wei Rao

Matthew Pavlovich

Trends Publisher Jessica Miles

Journal Manager Rolf van der Sanden

Journal Administrator Patrick Scheffmann

Advisory Board

Nasim Annabi Anthony Atala Maria Barbosa Irina Borodina Carlijn Bouten Joaquim Cabral George Guo-Qiang Chen Don Cowan Cees Dekker Martin Fussenegger Caixia Gao Man Bock Gu Kim Hamad-Schifferli Keith Joung Robert Langer Tomas Macek Bo Mattiasson Anton Middelberg Roisin Owens Jean Peccoud Jim Philp Milica Radisic Sergio Riva Stuart Smyth Gregory Stephanopoulos Annemiek ter Heijne Danielle Tulman-Ercek Tomasz Twardowski

Mathias Uhlén Mark van Loosdrecht

(Contents continued)

107 Biomembranes in bioelectronic sensing

A.K. Jayaram, A.M. Pappa, S. Ghosh, Z.A. Manzer, W.C. Traberg, T.P.J. Knowles, S. Daniel, and R.M. Owens

124 Bioinformational trends in grape and wine biotechnology

Thomas A. Dixon, Thomas C. Williams, and Isak S. Pretorius



On the cover: The massive amount of plastic waste has become a pressing environmental problem. Biocatalytic depolymerization of plastic waste mediated by enzymes has emerged as a sustainable approach for plastic treatment and recycling. In pages 22–37 of this issue, Zhu and colleagues discuss how mining and engineering efficient plastic-degrading enzymes through state-of-the-art techniques holds great promise for plastic waste mitigation and valorization. Cover image from Na Wei, Baotong Zhu, and Kristina Davis.

Editorial Inquiries
Trends in Biotechnology
Cell Press
50 Hampshire St. 5th Floor
Cambridge, MA 02139, USA
Tel: 617 386 2800
E-mail: tibtech@cell.com

