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 Знание языков

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 Опыт работы

Учреждение	Научно-исследовательский институт биологии, Лаборатория прикладной биологии и экологии
Период времени	2024 до настоящего времени
Звание/степень	Исследователь

Учреждение	Научно-исследовательский институт биологии, Лаборатория прикладной биологии и экологии
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Звание/степень	Младший научный сотрудник

 Публикации

Статья
Fluid-specific detection of environmental pollutant moxifloxacin hydrochloride utilizing a rare-earth niobate decorated functionalized carbon nanofiber sensor platform
Shen-ming Chen, Mariya Antony John Felix, Chandini Ragumoorthy, Tse-Wei Chen, G. Kiruthiga, Abhishek Singh, Karen Ghazaryan, Amal M. Al-Mohaimeed, Mohamed S Elshikh
Environmental Research 2025 120349

Статья
Biogenic nanoparticles for managing salinity stress-related crop and environmental risks: realistic applications and challenges
Abhishek Singh, Shreni Agrawal, Vishnu D. Rajput, Tatiana Minkina, Christopher Rensing, Mohamed S. Elshikh, Yufei Zhao, Athanasios Alexiou, Marios Papadakis, Karen Ghazaryan
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Статья
Addressing Abiotic Stresses and Advancing SDGs by Biochar for Sustainable Agriculture and Environmental Restoration
Abhishek Singh, Ragini Sharma, Sakshi Singh, Rupesh Kumar Singh, Athanasios Alexiou, João Ricardo Sousa, Hassan El-Ramady, Marina Burachevskaya, Vishnu D. Rajput, Karen Ghazaryan
Egyptian Journal of Soil Science 2025 463-489

Статья

Nanoparticle-Enhanced Strategies for Abiotic Stress Tolerance in Plants

Abhishek Singh, Shreni Agrawal, Richa Das, Vishnu D Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Hassan Ragab El-Ramady, Abdel Rahman Mohammad Al Tawaha, Karen Ghazaryan
Plant Stress Tolerance: Molecular Mechanisms and Breeding Strategies 2025 441-464

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Nanobiotechnology Approaches for Enhancing Crop Resilience to Salinity Stress

Abhishek Singh, Shreni Agrawal, Shivangee Solanki, Vishnu D. Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Hassan Ragab El-Ramady, Abdel Rahman Mohammad Al Tawaha, Karen Ghazaryan
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Prediction of mass loss in different organic materials under field mediterranean conditions: Influence of the initial chemical quality

João Ricardo Sousa, Abhishek Singh, Karen Ghazaryan, Rupesh Kumar Singh, Vishnu D. Rahput, Henrique Trindade, J. Coutinho
Journal of Ecological Engineering 2025 181-194

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Sol-gel synthesis, characterizations of efficient Y3+ doped ZnO nanoparticles for photocatalytic dye degradation and energy storage applications

Abhishek Singh, Muhammad Ramzan, Sajawal ur Rehman Khan, Islem Abid, Faisal Saud Binhuday, Muhammad Abdul Majid, Abdul Rehman, Asad ur Rehman Khan
Journal of Sol-Gel Science and Technology 2025 180-196

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Impact of Nanofertilizers for the Mitigation of Multiple Environmental Stresses

Abhishek Singh, Sapna Rawat, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Abdel Rahman Mohammad Al Tawaha, Ashi Varshney
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Green Synthesis of Nanofertilizers and Their Application for Crop Production

Abhishek Singh, Ragini Sharma, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Abdel Rahman Mohammad Al Tawaha, Ashi Varshney
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Impact of Salinity Stress and Zinc Oxide Nanoparticles on Macro and Micronutrient Assimilation: Unraveling the Link between Environmental Factors and Nutrient Uptake

Abhishek Singh, Rakesh Singh Sengar, Vishnu D. Rajput, Uday Pratap Shahi, Abdul Latief Al-Ghzawi, Karen Ghazaryan, Tatiana Minkina, Abdel Rahman Mohammad Al Tawaha, Omar Mahmoud Al Zoubi, Talaat Habeeb
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Advancing Agricultural Resilience in Ararat Plain, Armenia: Utilizing Biogenic Nanoparticles

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Abhishek Singh, Gohar Margaryan, Anna Harutyunyan, Hasmik S. Movsesyan, Hrant Khachatryan,

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Hassan El-Ramady, Karen Ghazaryan

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Zinc Oxide Nanoparticles Influence on Plant Tolerance to Salinity Stress: Insights into

Physiological, Biochemical, and Molecular Responses

Abhishek Singh, Vishnu D. Rajput, Shivani Lalotra, Shreni Agrawal, Karen Ghazaryan, Jagpreet Singh,

Tatiana Minkina, Priyadarshani Rajput, Saglara Mandzhieva, Athanasios Alexiou

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Effects of environmental metal and metalloid pollutants on plants and human health:

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Priyadarshani Rajput, Abhishek Singh, Shreni Agrawal, Karen Ghazaryan, Vishnu D. Rajput,

Hasmik Movsesyan, Saglara Mandzhieva, Tatiana Minkina, Athanasios Alexiou

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Nanotechnology applications for enhanced crop growth and yield. Chapter 4

Sapna Rawat, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana M. Minkina,

Abdel Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput

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Nanobiotechnology combined approaches for sustainable agriculture. Chapter 1

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Impact of nano-enzyme and nanomics for sustainable agriculture: Current status and future prospective

Shivangi Singh, Omkar Singh, Sakshi Singh, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan,

Vaishali Singh, Athanasios Alexiou, Abdel Rahman Mohammad Said Al-Tawaha, Aleksandr Yesayan,

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Nano-omics-based abiotic and biotic stresses management

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Detoxification of Biomedical Waste

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Microbial Enzymes for Eco-Friendly Recycling of Wastepaper by Deinking

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Microbial Manganese Peroxidase: Ligninolytic Enzymes for Bioremediation

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Nanoparticles in revolutionizing crop production and agriculture to address salinity stress challenges for a sustainable future

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Carbon Nanodot-Microbe-Plant Nexus in Agroecosystem and Antimicrobial Applications

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Nanoparticles Mediated Salt Stress Resilience: A Holistic Exploration of Physiological, Biochemical, and Nano-omics Approaches

Abhishek Singh, Vishnu D. Rajput, Shreni Agrawal, Karen Ghazaryan, Tatiana Minkina,

Abdel Rahman Mohammad Al Tawaha, Avnish Chauhan, Saglara S. Mandzhieva, Rupesh Kumar Singh,

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Green Remediation Harnessing Plant-Based Strategies for Removal of Emerging Soil Contaminants

Karen Ghazaryan, Aman Verma, Sapna Rawat, Amrit Warshini, Priyadarshani Rajput, Tatiana Minkina,

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Nanoparticle-mediated approaches in agriculture addressing abiotic stress from soil to plant cells

Vishnu D. Rajput, Abhishek Singh, Bhavana Tomar, Tatiana Minkina, Hasmik S. Movsesyan,
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In-depth Exploration of Nanoparticles for Enhanced Nutrient Use Efficiency and Abiotic Stresses Management: Present Insights and Future Horizons

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Tatiana Minkina, Athanasios Alexiou, Marios Papadakis, Rupesh Kumar Singh, Sakshi Singh,
João Ricardo Sousa, Hassan Ragab El-Ramady, Faisal Zulfiqar, Rahul Kumar, Abdullah Ahmed Al-Ghamdi,
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Addressing hidden hunger via improving soil health and crop nutrients through nanofortification

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Emerging technologies for sustainable soil management and precision farming

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Unveiling nanomaterial-induced toxicity: Navigating challenges to modern cultivation and soil management practices

Aman Verma, Abhishek Singh, Sapna Rawat, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva,
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Revolutionizing agricultural sustainability and food security and management to achieve sdgs goals via nanotechnology

Aishwarya Sharma, Abhishek Singh, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva,
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Crop Biofortification Innovative Solutions for Micronutrient Deficiency

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Revolutionizing sustainable agriculture with nano-priming technology: A leap towards resilient and high-yield crops

Divya Pandey, Abhishek Singh, Nare Darbinyan, Armine David Chakhmakhchyan, Shipra Singh Parmar, Karen Ghazaryan
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Implementing sustainable nano-bioremediation for emerging pollutants: An environmentally friendly remediation strategy

Karen Ghazaryan, Aman Verma, Sapna Rawat, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Shen-Ming Chena, Rupesh Kumar Singh, Hassan Ragab El-Ramady, Abhishek Singh
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Utilizing nanotechnology in agriculture: A balancing approach between environmental health and risks

Abhishek Singh, Bhavana Tomar, Anna Harutyunyan, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Shen-Ming Chena, Rupesh Kumar Singh, Hassan Ragab El-Ramady, Karen Ghazaryan
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Additive-Mediated Phytoextraction of Copper-Contaminated Soils Using *Medicago lupulina* L.

Hasmik Vardumyan, Abhishek Singh, Vishnu D. Rajput, Tatiana Minkina, Hassan Ragab El-Ramady, Karen Ghazaryan
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Статья

Carbon Sequestration through Organic Amendments, Clay Mineralogy and Agronomic Practices: A Review

Shivangi Omkar Singh, Uday Pratap Shahi, Omkar Singh, Praveen Kumar Singh, Abhishek Singh, Vishnu D. Rajput, Tatiana Minkina, Hassan El-Ramady, Karen Ghazaryan
Egyptian Journal of Soil Science 2024 581-598

Статья

Enhancing Crop Production: Unveiling the Role of Nanofertilizers in Sustainable Agriculture and Precision Nutrient Management

Karen Ghazaryan, Divya Pandey, Sakshi Singh, Vahagn Varagyan, Athanasios Alexiou, Dimitrios Petropoulos, Athanasios Kriemadis, Vishnu D. Rajput, Tatiana Minkina, Rupesh Kumar Singh, João Ricardo Sousa, Sandeep Kumar, Hassan El-Ramady, Omkar Singh, Abhishek Singh
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Earthworms As An Emerging Biotechnological Intervention in the Mitigation of Microplastics

Aishwarya Sharma, Shailja Kumar, Abhishek Singh, Ragini Sharma, Vishnu D. Rajput,
Hasmik S. Movsesyan, Tatiana Minkina, Rupesh Kumar Singh, Hassan El-Ramady, Karen Ghazaryan
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Nanotechnology Products in Agriculture and Environmental Protection: Advances and Challenges

Abhishek Singh, Sapna Rawat, Vishnu D. Rajput, Tatiana Minkina, Saglara Mandzhieva,
Arevik Sh. Eloyan, Rupesh Kumar Singh, Omkar Singh, Hassan El-Ramady, Karen Ghazaryan
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Unveiling the salinity tolerance potential of Armenian Dandur (*Portulaca oleracea* L.) genotypes: Enhancing sustainable agriculture and food security

Gohar Margaryan, Abhishek Singh, Hrant Khachatryan, Vishnu D Rajput, Tatiana Minkina,
Dimitrios Petropoulos, Athanasios Kriemadis, Athanasios Alexiou, Mohamed S. Elshikh,
Abd El-Zaher M.A. Mustafa, Karen Ghazaryan
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Nanotechnology in the soil system: An ecological approach towards sustainable management

Hassan El-Ramady, J'ozsef Prokisch, Daniella S'ari, Abhishek Singh, Karen Ghazaryan, Vishnu D. Rajput,
Eric C. Brevik
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Eco-Friendly Solutions: Integrating Wild Vegetables for Sustainable Agriculture Food Security and Human Health

Shipra Singh Parmar, Impa H.R., Ramesh Kumar, Abhishek Singh, Aleksandr Yesayan, Vishnu D Rajput,
Tatiana Minkina, Karen Ghazaryan, Hassan El-Ramady
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Статья

Impact nano- and micro- form of CdO on barley growth and oxidative stress response

Kirill Azarin, Alexander Usatov, Tatiana Minkina, Ilya Alliluev, Nadezhda Duplii, Saglara Mandzhieva,
Abhishek Singh, Vishnu D. Rajput, Sandeep Kumar, Marwa A. Fakhr, Mohamed S. Elshikh, M. Ajmal Ali,
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Статья

Bioremediation of heavy metals contaminated soils using nanotechnology

Amin Fathi, Seyede Roghie Ghadirnezhad Shiade, Ghasem Parmoon, Yasser Yaghoubian,
Hemmatollah Pirdashti, Vishnu D. Rajput, Abhishek Singh, Karen Ghazaryan, Tatiana Minkina
Bio-organic Amendments for Heavy Metal Remediation: Water, Soil and Plant Approaches and Technologies
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Climate change and drought: challenges for agriculture in arid environments

Samar Shawaqfeh, Abdel Rahman Mohammad Al Tawaha, Hikmet Gunal, Abdel Razzaq Al-Tawaha, Marwa Adel Qotb, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Amjad M. Husaini, Tauseef A. Bhat, Ekaterina Kozuharova, Rizwan Rashid
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Agricultural water scarcity: an emerging threat to global water security

Rahul Kanaoujiya, Olivia Saha Roy, Amit Jaiswal, Sani Kumar Singh,

Abdel Rahman Mohammad Al Tawaha, Shekhar Srivastava, Abdel Razzaq Al-Tawaha, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali,

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Optimizing irrigation scheduling: strategies for sustainable water management in agriculture

Riham Fouzi Zahalan, Abdel Rahman Mohammad Al Tawaha, Hikmet Gunal, Abdel Razzaq Al-Tawaha,

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Soil fertility in arid lands: strategies for sustainable management and fertilization

Hikmet Gunal, Mesut Budak, Elif Gunal, Mirac Kilic, Abdel Rahman Mohammad Al Tawaha,

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Impacts of climate change and drought stress on plant metabolome

Shah Khalid, Abdel Rahman Mohammad Al Tawaha, Nadia, Hikmet Gunal, Abdel Razzaq Al-Tawaha,

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Biofertilizers: a sustainable solution for enhancing soil fertility and crop productivity

Abdel Rahman Mohammad Al Tawaha, Arun Karnwal, Siddhartha Pati, Abdel Razzaq Al-Tawaha,

Atul Kumar Upadhyay, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali,

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Resilience in the face of drought: strategies for optimizing plant resilience and enhancing nutrient transfer

Abdel Rahman Mohammad Al Tawaha, Abdel Razzaq Al-Tawaha, Marwa Adel Qotb, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Amjad M. Husaini, Tauseef A. Bhat, Ekaterina Kozuharova, Rizwan Rashid

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Drought resilience in agriculture: mechanisms and adaptation strategies in a changing climate

Abdel Rahman Mohammad Al Tawaha, Ibrahim Alrawashdeh, Doaa Abu-Darwish, Abdel Razzaq Al-Tawaha, Alla Aleksanyan, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Amjad M. Husaini, Tauseef A. Bhat, Ekaterina Kozuharova, Rizwan Rashid, Marwa Adel Qotb, Abeer Jubily

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Revolutionizing Crop Production: Nanoscale Wonders-Current Applications, Advances, and Future Frontiers

Abhishek Singh, Vishnu D. Rajput, Ashi Varshney, Ragini Sharma, Karen Ghazaryan, Tatiana Minkina, Athanasios Alexiou, Hassan El-Ramady

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In-vitro Digestibility Organic Materials: Relation with Field Mass Loss Litter Bag Method

João Ricardo Sousa, Abhishek Singh, Karen Ghazaryan, Rupesh Kumar Singh, Henrique Trindade,

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Soil Pollution: An Agricultural and Environmental Problem with Nanotechnological Remediation Opportunities and Challenges

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Nanotechnology-based genome editing: Empowering sustainable agriculture for enhanced food security

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Revolutionizing agriculture: Harnessing phytonanotechnology for sustainable food security

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Nanotechnology and biotechnology: Transforming agriculture for food security and sustainability

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Mushrooms in food security and environmental management: Sustainable solutions for a changing world

Karen Ghazaryan, Abhishek Singh, Vishnu D Rajput, Ashi Varshney, Tatiana M. Minkina,
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Environmental implications of nanomaterial-plant interactions: Navigating the benefits and concerns

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Harvesting nanotech: Responsible policies for integrating nanotechnology in agriculture and health

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Unlocking sustainable agriculture: The crucial role of plant genetic engineering

Shivani Lalotra, Tiyasa Mukherjee, Abhishek Singh, Praveen Kumar Yadav, Priyanka Upadhyay,
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Enhancing crop food security in the Ararat Plain region of Armenia: harnessing arid soil resources and biogenic nanoparticles for salinity-resilient cultivation

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Study of tolerance and phytodesalination potential of wheat, oat, emmer, and barley for sustainable saline agriculture

GHAZARYAN, K.A., HARUTYUNYAN, A.S., KHACHATRYAN, H.E., SINGH, A., MINKINA, T.M., RAJPUT, V.D.,

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Small Tech, Big Impact: Agri-nanotechnology Journey to Optimize Crop Protection and Production for Sustainable Agriculture

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Статья

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