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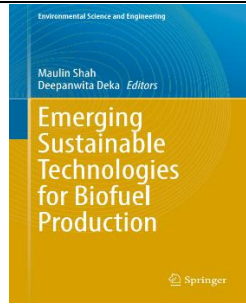
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**Department of Botany  
List of Publications**

Sl. No.	Author/Editor	Research Article/Paper/Book/	Publisher National/International	Title	Year of publication	Impact factor	Cover page
1	Deepanwita Deka	Edited Book	Springer An international publisher	Emerging Sustainable Technologies for Biofuel Production -Environmental Science and Engineering	2024	NA	



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2	Deepanwita Deka	Research Paper	Taylor & Francis An international publisher	Endophytic fungi associated with <i>Brucea mollis</i> Wall. ex Kurz.: a hidden source of antimicrobial and antioxidant metabolites.	2023	3.5	
3	Kashmita Ojah	Authored Book	Union Book Publication	Life Science and Environment	2023	NA	



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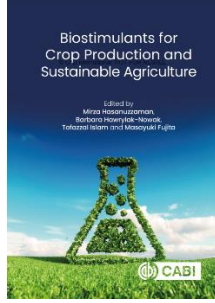
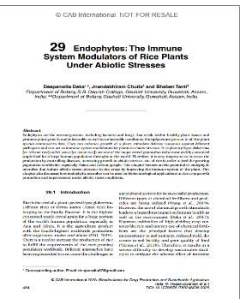
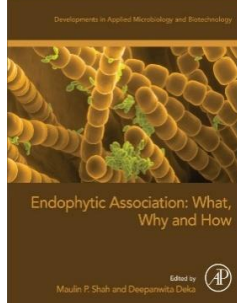
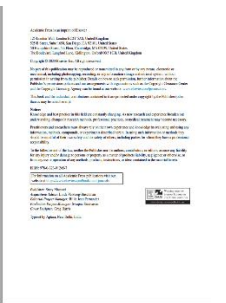
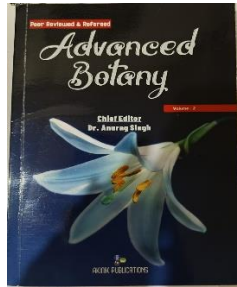
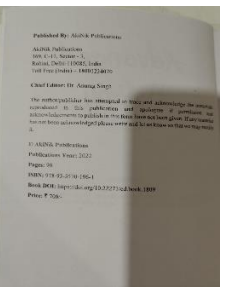
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4	Deepanwita Deka	Book chapter In: Mirza Hasanuzzaman, Barbara Hawrylak -Nowak, Tofazzal Islam and Masayuki Fujita (eds.), Biostimulants for Crop Production and Sustainable Agriculture.	CAB International	Endophytes: The Immune System Modulators of Rice Plants Under Abiotic Stresses.	2022	NA	 
5	Deepanwita Deka	Edited Book	Elsevier An international publisher	Endophytic Association: What, Why and How	2022	NA	 
6	Kashmita Ojah	Book chapter	AkiNik Publications	Study of Phytoplankton Composition in Water Bodies of Dhing in Nagao District, Assam	2022	NA	 



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7	Deepanwita Deka	Book chapter In: A.N. Yadav, A.A. Rastegari and N. Yadav (ed.), Microbiomes of Extreme Environments: Biodiversity and Biotechnological Applications.	CRC Press, Taylor & Francis Group	Halophillic Rhizobacteria as the Acquaintance of Crop Plants Enduring Soil Salinity.	2021	NA	<p style="text-align: right;"><small>Rhizobial Rhizobacteria as the Acquaintance of Crop Plants Enduring Soil Salinity 41</small></p> <p style="text-align: center;">Chapter 2 Halophillic Rhizobacteria as the Acquaintance of Crop Plants Enduring Soil Salinity</p> <p style="text-align: center;"><small>Deepanwita Deka and Divyansu Kumar, 2021</small></p> <hr/> <p><b>Introduction</b></p> <p>The beginning of the 21st century can be characterized by the universal severity of water resources, environmental pollution and increased utilization of soil and water (Chakravarty and Kumar 2013). Climate change accelerates abiotic stresses such as drought, salinity besides drought fluctuations in temperature, etc. (Chakravarty and Kumar 2013). Soil salinity is one of the main stressors and damaging environmental stresses, which results in changes of soil physico-chemical properties, degrading soil quality, reducing loss of soil organic matter consequently affecting plant growth, agricultural output, etc. (Abdel-El 2016; Yousef and El-Hamdy 2005; Dababir and Aghar 2013). This also leads to increased salinization of crops by pathogens and pests (Chakravarty 2013). Salinity stress results due to many reasons such as low precipitation, high surface evaporation, leaching of cationic salts, irrigation with saline water and poor cultural practices. Salinized areas are increasing at a rate of 0.7% annually (Chakravarty and Kumar 2013). It has been estimated that now (in 2014) an arable land would be utilized by the year 2070 (Dababir et al. 2011).</p> <p>Soil salinization involves increase in the concentration of dissolved salts in the soil profile, which depends on both soil and atmospheric factors. Crop productivity is negatively impacted for three reasons: (i) crop plants that depend on plants for food, nutrients and water (Chakravarty and Kumar 2013); (ii) in a saline soil the Electrical Conductivity (EC) of the soil solution (EC<sub>e</sub>) is far more toxic to a plant species at 4 dS/m (approximately 40 mM NaCl) at 25°C and has exchangeable sodium of 15% (Chakravarty and Kumar 2013). Under this EC<sub>e</sub>, growth and yield of crop plants are reduced (Mishra 1989; Jami et al. 2011). It has been established that high salinity has affected 36% of total cultivated and 50% of irrigated agricultural lands worldwide (Chakravarty and Kumar 2013). More than 50% of the world energy consumption is supplied by crop plants such as wheat, rice and maize (Ghani 2016). Therefore, decrease in plant yield due to soil salinity stress severely affects all major crops in the food chain directly or indirectly.</p> <p>Class (2014) stated that generally, the soil exposure of saline soils in arid and semi-arid regions is nearly 1.7% and about 40% in irrigated lands. Each plant requires a reasonable quantity of salt dissolved in soil for growth and development. However, high concentration of salt in soil has a negative effect on soil physical and chemical properties, thereby directly or indirectly affecting</p> <p><small>©2014 Edging, Springer, Springer of Science, Springer University, Springer 78111, Assam, India. * Corresponding author: dsbdeorah@gmail.com</small></p>
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