

1. Record Nr.	UNINA9910857789303321
Titolo	The Poplar Genome // edited by Ilga Porth, Jaroslav Klápšt, Athena McKown
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2024
ISBN	3-031-50787-8
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (247 pages)
Collana	Compendium of Plant Genomes, , 2199-479X
Disciplina	583.69
Soggetti	Botany Genetics Forestry Plant Science Genetics and Genomics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Genomics resources for functional genomics in poplars -- The poplar Pangenome -- Epigenomics in poplar -- Chromosomal rearrangements and 3D organization of the poplar genome -- Sex-based identity in poplars -- Phylogenomics, comparative genomics, interspecific hybridization in poplar -- Genomics of Chinese poplars -- Genomic landscape of adaptation in European poplars -- Genomic landscape of adaptation in North American poplars -- Poplar and the associated microbiome -- Wood formation and valorization in poplar -- Genomics of secondary metabolism in poplar -- Applied Genomics in poplar -- Applied Genomics in poplar: isoprene emissions -- Applied Genomics in poplar: genetic modifications -- Applied Genomics in poplar: adaptation to climate change -- Applied Genomics in poplar: phytoremediation -- Applied Genomics in poplar: innovative breeding -- Applied Genomics in poplar: bioenergy -- Prospects: The Poplar Genome, a Model for Understanding Angiosperm Evolution and Supporting Tree Improvement Efforts. .
Sommario/riassunto	This book is the first comprehensive compilation of research on state ofthe-art genomics on the most advanced model tree species

including genome assemblies, insights into genomic structural features and methylation patterns, wholegenome resources used for population genomics and adaptation to climate, enabled breeding vs. classical genetics and traditional breeding, comparative genomics, and elucidations on functional genomics. The latest developments in the genomics of wood formation are particularly highlighted. Altogether, the book contains over 300 pages in over 15 chapters authored by globally reputed experts in the relevant fields of this tree crop's genomics research. This book is useful for students, teachers, and scientists in academia and governmental or private tree improvement agencies or companies interested in genetics, pathology, entomology, physiology, molecular genetics and breeding, in vitro culture and genetic engineering, land restoration, and agroforestry solutions. .
