

1. Record Nr.	UNINA9910973442003321
Titolo	A sustainability challenge : food security for all : report of two workshops // National Research Council of the National Academies
Pubbl/distr/stampa	Washington, D.C., : National Academies Press, 2012
ISBN	9786613558114 9780309222662 0309222664 9781280380204 1280380209 9780309222648 0309222648
Edizione	[1st ed.]
Descrizione fisica	1 online resource (265 p.)
Disciplina	338.19
Soggetti	Food supply - Statistics - Research Food supply - Research Food security - Research Globalization Sustainable agriculture Food industry and trade
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Committee on Food Security for All as a Sustainability Challenge, Science and Technology for Sustainability Program, Policy and Global Affairs."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	pt. 1. Measuring food insecurity and assessing the sustainability of global food systems, workshop one -- pt. 2. Exploring sustainable solutions for increasing global food supplies, workshop two.
Sommario/riassunto	'The National Research Council's Science and Technology for Sustainability Program hosted two workshops in 2011 addressing the sustainability challenges associated with food security for all. The first workshop, Measuring Food Insecurity and Assessing the Sustainability of Global Food Systems, explored the availability and quality of commonly used indicators for food security and malnutrition; poverty;

and natural resources and agricultural productivity. It was organized around the three broad dimensions of sustainable food security: (1) availability, (2) access, and (3) utilization. The workshop reviewed the existing data to encourage action and identify knowledge gaps. The second workshop, Exploring Sustainable Solutions for Increasing Global Food Supplies, focused specifically on assuring the availability of adequate food supplies. How can food production be increased to meet the needs of a population expected to reach over 9 billion by 2050? Workshop objectives included identifying the major challenges and opportunities associated with achieving sustainable food security and identifying needed policy, science, and governance interventions. Workshop participants discussed long term natural resource constraints, specifically water, land and forests, soils, biodiversity and fisheries. They also examined the role of knowledge, technology, modern production practices, and infrastructure in supporting expanded agricultural production and the significant risks to future productivity posed by climate change. This is a report of two workshops.'--Publisher's description.

2. Record Nr.	UNINA9911021972803321
Autore	Dey Pranab Kumar
Titolo	Power Supplies for Synchrotron Accelerators // by Pranab Kumar Dey
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	9789819776061 9789819776054
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (163 pages)
Collana	Springer Tracts in Electrical and Electronics Engineering, , 2731-4219
Disciplina	530.14
Soggetti	Particles (Nuclear physics) Quantum field theory Electric power production Plasma accelerators Elementary Particles, Quantum Field Theory Electrical Power Engineering Plasma-based Accelerators
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Initial accelerators -- . Power supplies for high energy particle accelerators -- Comparison of power supplies to synchrotron accelerators of 1950's -- Changing patterns of magnet excitations -- Functional structures, converter topologies and control systems for Particle Accelerators.

This book presents the gradual development of particle accelerators that originated from the theory of atomic structure with the disintegration of nuclei in 1911, pioneering findings on radioactivity in 1919, and a few fundamental theories. It describes how the initial energy level has been raised to the present stage of operation and explains how the technological constraints that surfaced during operation over the years were gracefully solved in each step. This book has shared the working experience in a reputed particle accelerator project and tried to highlight various technical difficulties and approaches to find viable solutions to critical problems. The consistent demand for higher energies inspired the researchers to search for various possibilities and concentrate on finding suitable schemes to continue their experiments with particles accelerating at higher energies. This book attempted to encourage students, graduate engineers, researchers, and practicing engineers to focus and engage in new directions with an approach to undertake design, applications, and development of power systems for different patterns of load, power electronics, instrumentation, and control engineering. Practicing engineers working on Particle Accelerator projects may find new aspirations for selecting topics for their research and attempt to develop viable techniques for performance improvements. It is expected to find wide readership amongst science and engineering students and the libraries of colleges, universities, and research organizations may retain this book for the benefit of all because the treatment and presentation of engineering analysis of power supplies for magnet excitation has been taken as far as possible to ground level and dealt differently. It tried to show how simple concepts could initiate revolutionary changes in the development of particle accelerators to inculcate how simple ideas can be explored with confidence to realize a dream and how risks are taken in technological designs after considering all the possibilities of hazards and setbacks with the sole objective of improving performance and cost. The effort to describe a few significant practical achievements in the application of specifically designed electrical engineering equipment, power electronics, and engineering systems selected and developed for particle accelerators may be useful for future projects. This book contains adequate figures and tables with special features like practical illustrations and proper explanations. A new format for presentation will attract the readers and they may find this approach simple to understand the process of particle acceleration and their limitations in working with higher energies. The subject has been presented in such a way that it will be useful for countries intending to develop their particle accelerators.
