

1. Record Nr.	UNINA9910778759803321
Titolo	Current status of neutron-scattering research and facilities in the United States [[electronic resource] /] / Panel on Neutron Scattering, Solid State Sciences Committee, Board on Physics and Astronomy, Commission on Physical Sciences, Mathematics, and Resources, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1984
ISBN	1-280-18634-8 9786610186341 0-309-56446-8
Descrizione fisica	1 online resource (115 p.)
Disciplina	539.7213
Soggetti	Neutrons - Scattering Nuclear facilities Nuclear physics - Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Work supported by the U.S. Dept. of Energy, Division of Materials Sciences, under grant No. DE-FG01-81ER10844, and by the National Science Foundation under grant No. DMR-8119500.
Nota di contenuto	""Current Status of Neutron-Scattering Research and Facilities in the United States""; ""Copyright""; ""PREFACE""; ""Contents""; ""1. CONCLUSIONS AND RECOMMENDATIONS ""; ""CONCLUSIONS""; ""RECOMMENDATIONS""; ""2. INTRODUCTION ""; ""3. CURRENT STATUS OF NEUTRON-SCATTERING FACILITIES IN THE UNITED STATES ""; ""FACILITY DESCRIPTIONS""; ""High Flux Beam Reactor (HFBR)--Brookhaven National Laboratory""; ""Intense Pulsed Neutron Source (IPNS)--Argonne National Laboratory""; ""Massachusetts Institute of Technology Reactor (MITR)""; ""National Bureau of Standards Reactor (NBSR)"" ""Oak Ridge National Laboratory Reactors (ORNL)""""University of Missouri Research Reactor (MURR)""; ""Weapons Neutron Research/Proton Storage Ring Facility (WNR/PSR) Los Alamos National Laboratory""; ""Summary of Facilities""; ""THE USER COMMUNITY""; ""COMPARISON WITH THE EUROPEAN COMMUNITY""; ""4. OVERSEAS

NEUTRON-SCATTERING FACILITIES ""; ""RESEARCH REACTORS""; ""PULSED NEUTRON SOURCES""; ""5. RECENT NEUTRON-SCATTERING RESEARCH IN THE UNITED STATES; COMPARISONS WITH EUROPE ""; ""CONDENSED-MATTER PHYSICS""; ""Magnetic Systems""; ""Phase Transition""; ""New Materials and Phenomena"" ""Crystal Dynamics"" ""Defect Systems""; ""Surfaces and Overlayers""; ""Liquids and Glasses""; ""Quantum Fluids""; ""Classical Liquids""; ""Glasses and Amorphous Solids""; ""NEUTRON OPTICS""; ""CHEMISTRY""; ""Crystallographic Research""; ""Hydrides, Organometallic Compounds, and Heteropoly Complexes""; ""Ionic Conductors and Ceramics""; ""Superconductors""; ""Framework Structures""; ""Charge-Density Studies""; ""Hydrogen-Bonded Compounds""; ""High-Precision Structure Studies""; ""Molecular Fluids and Molten Salts""; ""Chemical Spectroscopy""; ""Vibrational Spectroscopy"" ""Low-Energy Spectroscopy"" ""BIOLOGY""; ""Protein Crystallography""; ""Solution Scattering""; ""The Ribosome""; ""Partially Ordered Systems""; ""Inelastic Scattering""; ""Conclusion""; ""POLYMER AND COLLOID SCIENCE""; ""Areas of Special Interest""; ""Some Results from Neutron Scattering""; ""Instrumentation Needs""; ""MATERIALS SCIENCE AND ENGINEERING""; ""Studies of Microstructural Changes Produced by Temperature and Deformation""; ""Use of SANS in the Detection and Analysis of Damage""; ""Measurement of Texture and Residual Stresses by Neutron Diffraction"" ""Investigations of Phase Decomposition"" ""6. FUTURE OPPORTUNITIES: FACILITIES AND RESEARCH ""; ""CONDENSED-MATTER PHYSICS""; ""CHEMISTRY""; ""BIOLOGY""; ""POLYMERS""; ""MATERIALS SCIENCE""; ""NEUTRON OPTICS""; ""Role of Pulsed Sources""; ""Concluding Remarks""; ""APPENDIX A INSTITUTIONAL SPONSORS OF USERS OF MAJOR NEUTRON-SCATTERING FACILITIES IN THE UNITED STATES (JULY 1982-JUNE 1983)""; ""UNIVERSITIES""; ""INDUSTRIES""
