



Bringing The Past Into The Present: the NIST Legacy Publications

Archives 2015
August 21, 2015


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National Institute of Standards and Technology



- Non-regulatory federal agency made up of about 3,000 science and technology researchers
 - NIST promotes U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology
 - The Information Services Office (ISO) supports and enhances research activities of the NIST scientific community through a comprehensive program of knowledge management
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Digitizing the Agency's Legacy Collection



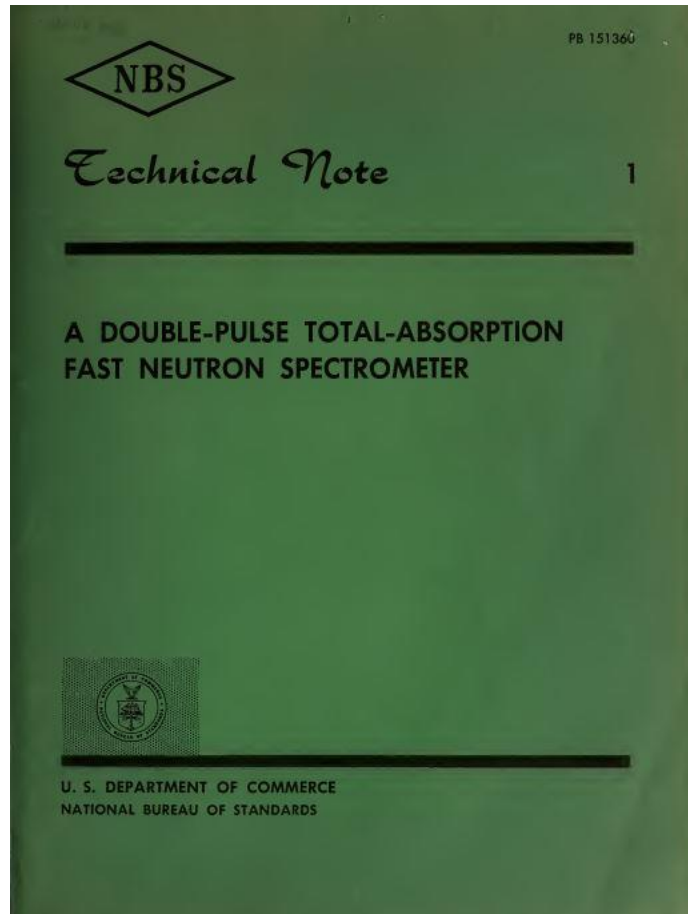
- Drivers
 - The Pubs
 - Selection and Planning
 - Implementation
 - Internet Archive
 - FDsys
 - Customer Feedback
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Drivers

- Increased customer requests for digitized publications
 - Trend toward digitizing library materials in the 2000s
 - Release of Office of Science and Technology Partnership (OSTP) memo on increasing access to results of federally-funded scientific research
- 

NIST Technical Series Publications



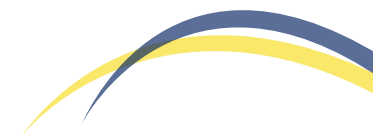
- First published in 1902
- Comprised of 92 series
- Approximately 37,000 publications, 24,000 to be digitized
- Still publishing today

Selection and Planning

- Conducted a survey of legacy publications in order to get an idea of the scope of the project
- No complete index of every NIST publication existed
- Dissemination restrictions
- Time management



Internet Archive



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Vol Bulletin of the Bureau of Standards, Vol. 8, 611-
by McBride, R.S:

7,203 0 0

Vol [1964]: Handbook of mathematical functions
by Abramowitz, Milton (editor); Stegun, Irena A. (editor)

4,321 2 1

Vol Circular 460: Publications of the

3,242 0 0

Vol Bureau of Standards Journal of Research, Vol.

3,190 0 0

Vol Bulletin of the Bureau of Standards, Vol. 8, 1-

2,456 1 0

Supplementary List of Publications of the National Bureau of Standards July 1, 1947, to June 30, 1957

UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

BULLETIN
of the
BUREAU OF STANDARDS
E. W. STRATTON, Director
VOLUME 7
1911

NATIONAL INSTITUTE OF STANDARDS & TECHNOLOGY
Research Information Center
Gaithersburg, MD 20899

STANDARDIZATION OF POTASSIUM PERMANGANATE SOLUTION BY SODIUM OXALATE
By R. S. McBride
CONTENTS

Handbook of Mathematical Functions
With
Formulas, Graphs, and Mathematical Tables

U.S. Department of Commerce
National Bureau of Standards
1964

PUBLICATIONS
of the
NATIONAL BUREAU OF STANDARDS
1961 to June 30, 1967

CIRCULAR 460

FORMULAS AND TABLES FOR THE CALCULATION OF MUTUAL AND SELF-INDUCTANCE
By Edward H. Rose and Paulink W. Green

CONTENTS

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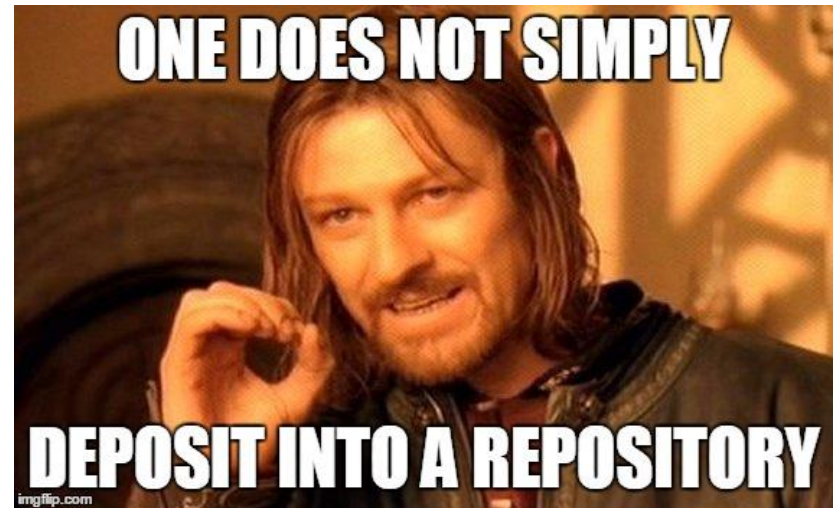


Federal Digital System (FDsys)

- Observes metadata standards
- Addresses digital preservation
- Conducts self-audit using TRAC
- Recognized for government publications
- Authentication and digital signatures

FDsys Implementation

- Testing, testing
- Decisions - standard vs custom collection
- Navigation - landing pages



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- Determination of Oxygen Concentration in Silicon and Germanium by Infrared Absorption [PDF 1426 KB]**
Commerce Department. National Institute of Standards and Technology. 1970.
Infrared absorption measurements were made at room temperature, 80 K, and 20 K to determine the absorption coefficient of oxygen in silicon and germanium single crystals. A study was done to compare the results of four experimental methods, which involved both absolute and difference procedures. Sources of error were identified, including that due to calculating the absorption coefficient with an..... [More Information](#)
- Radiochemical Analysis Section Mossbauer Spectroscopy. Nuclear Chemistry. Nuclear Instrumentation. Radioisotope. Summary Activities July 1968 to June 1969 [PDF 7227 KB]**
Commerce Department. National Institute of Standards and Technology. 1970.
Contents:Mossbauer spectroscopy (Instrumentation, SRM for the isomer shift of tin compounds, Constrained fitting of complex Mossbauer spectra; Nickel-61 hyperfine interactions, Mossbauer spectroscopy of iron doped TiO2, Towards a Hartree-Fock crystal field treatment of the electrons on Mossbauer nuclei); Nuclear chemistry (The discovery of errors in the detection of trace components in gamma..... [More Information](#)
- Microchemical Analysis Section Summary of Activities July 1969 to June 1970 [PDF 5873 KB]**
Commerce Department. National Institute of Standards and Technology. 1970.
Bureau's regular publications program. They provide a means for making available scientific data that are of transient or limited interest. Technical Notes may be listed or referred to in the open literature. For sale by the Superintendent of Documents,.... [More Information](#)
- Arpa-Nbs Program of Research on High Temperature Materials and Laser Materials Reporting Period July 1 to December 31, 1969 [PDF 3845 KB]**
Commerce Department. National Institute of Standards and Technology. 1970.
To this end the Bureau conducts research and provides central national services in four broad program areas. These are: (1) basic measurements and standards, (2) materials measurements and standards, (3) technological measurements and standards, and (4) transfer of... [More Information](#)
- Separation and Purification Section Summary of Activities July 1968 to June 1969 [PDF 4038 KB]**
Commerce Department. National Institute of Standards and Technology. 1970.
Contents:Ion exchange microstandards; Ion exchange substrates (Synthesis of copolymer beads, Sulfonation of copolymer beads, Infrared spectrophotometry of copolymers, Infrared spectrophotometry of sulfonated copolymers, Swelling studies); Copolymer and ion exchange microscropy; Chromatography (Gas chromatography (Divinylbenzene, Vinyl toluene, Sulfolane, 2-Methoxy ethanol, Ortho-fluorobenzoic..... [More Information](#)
- Analytical Coordination Chemistry Section [PDF 7211 KB]**
Commerce Department. National Institute of Standards and Technology. 1970.
Contents: Solid materials and liquid filters to check the photometric scales of spectrophotometers; Spectrophotometric determination of trace amounts of gold, iron, manganese and nickel in two glass standard reference materials; Study of the rhodamine 6G fluorescence; Fluorescence and absorption of rare-earths in glasses; Multipurpose precision flame spectrophotometer; Long-path flames; Hollow..... [More Information](#)

DETERMINATION OF OXYGEN CONCENTRATION IN SILICON AND GERMANIUM BY INFRARED ABSORPTION

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Metadata

Branch	Executive
Category	Executive Agency Publications
SuDoc Class Number	C 13.
Government Author	Commerce Department, National Institute of Standards and Technology (NIST).
Series Title	NBS Technical Notes
Publication Title	Determination of oxygen concentration in silicon and germanium by infrared absorption
Date Issued	January 1, 1970
Abstract	Infrared absorption measurements were made at room temperature, 80 K, and 20 K to determine the absorption coefficient of oxygen in silicon and germanium single crystals. A study was done to compare the results of four experimental methods, which involved both absolute and difference procedures. Sources of error were identified, including that due to calculating the absorption coefficient with an approximate equation which neglects multiple internal reflections. Measurements made on the same specimen at several temperatures give additional data on the relation of oxygen concentration to absorption coefficient at low temperatures.
Series Description	Studies or reports which are complete in themselves but restrictive in their treatment of a subject. Analogous to monographs but not so comprehensive in scope or definitive in treatment of the subject area. Often serve as a vehicle for final reports of work performed at NIST under the sponsorship of other government agencies.
Note	NOTE: THE "DATE ISSUED" ABOVE MAY DEFAULT TO JANUARY 1ST OF A GIVEN YEAR. TO THE VIEW THE MOST ACCURATE DATE OF ISSUE, REVIEW THE TITLE PAGE OF THE PUBLICATION.

Document in Context

[Determination of oxygen concentration in silicon and germanium by infrared absorption](#)

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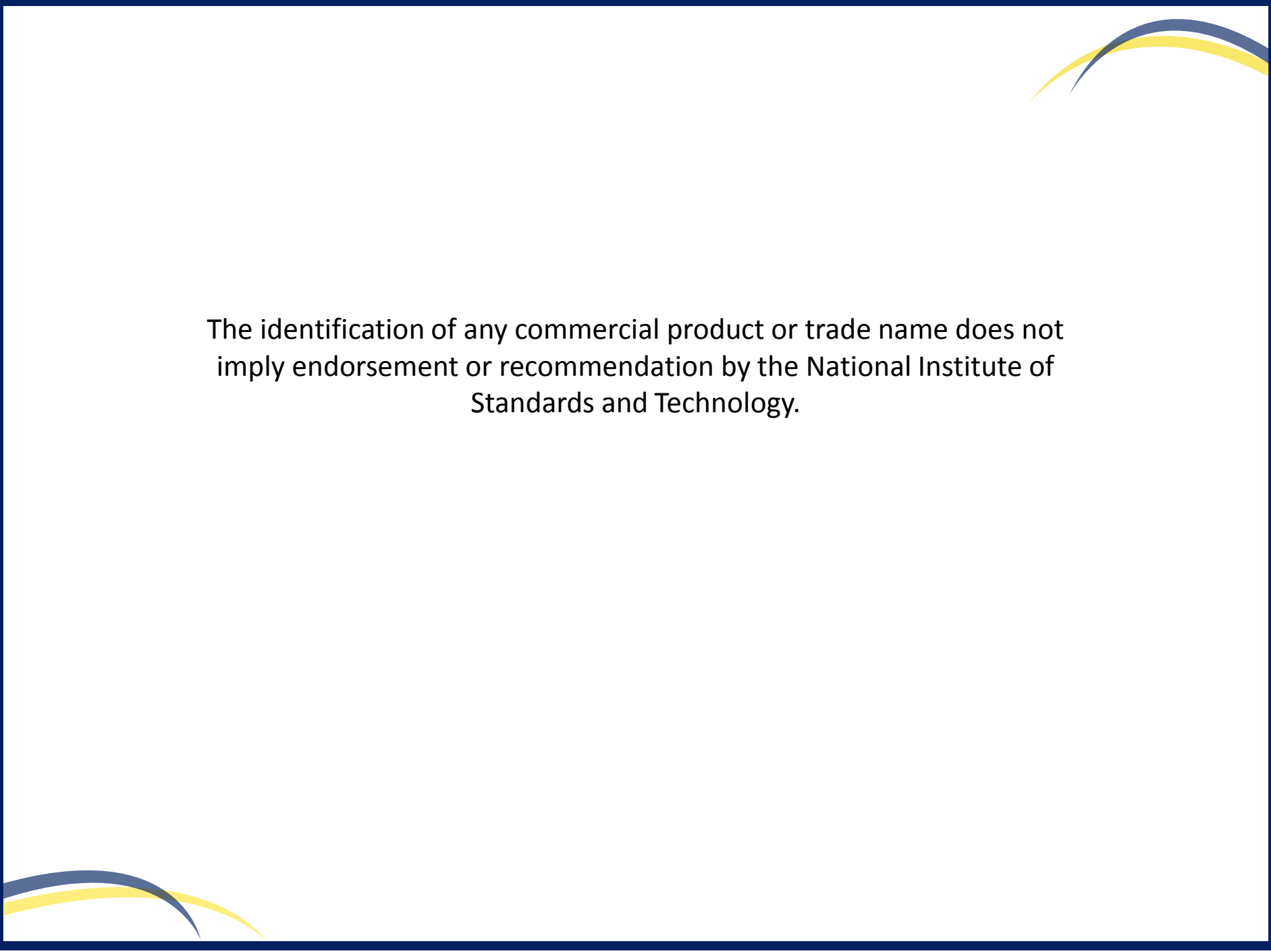
- Very positive customer feedback
- Increased customer demand for digital pubs



Up Next



- FDsys NextGen
- More digitizing and deposits



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Questions?