

Open Data and Data Citation at NIST

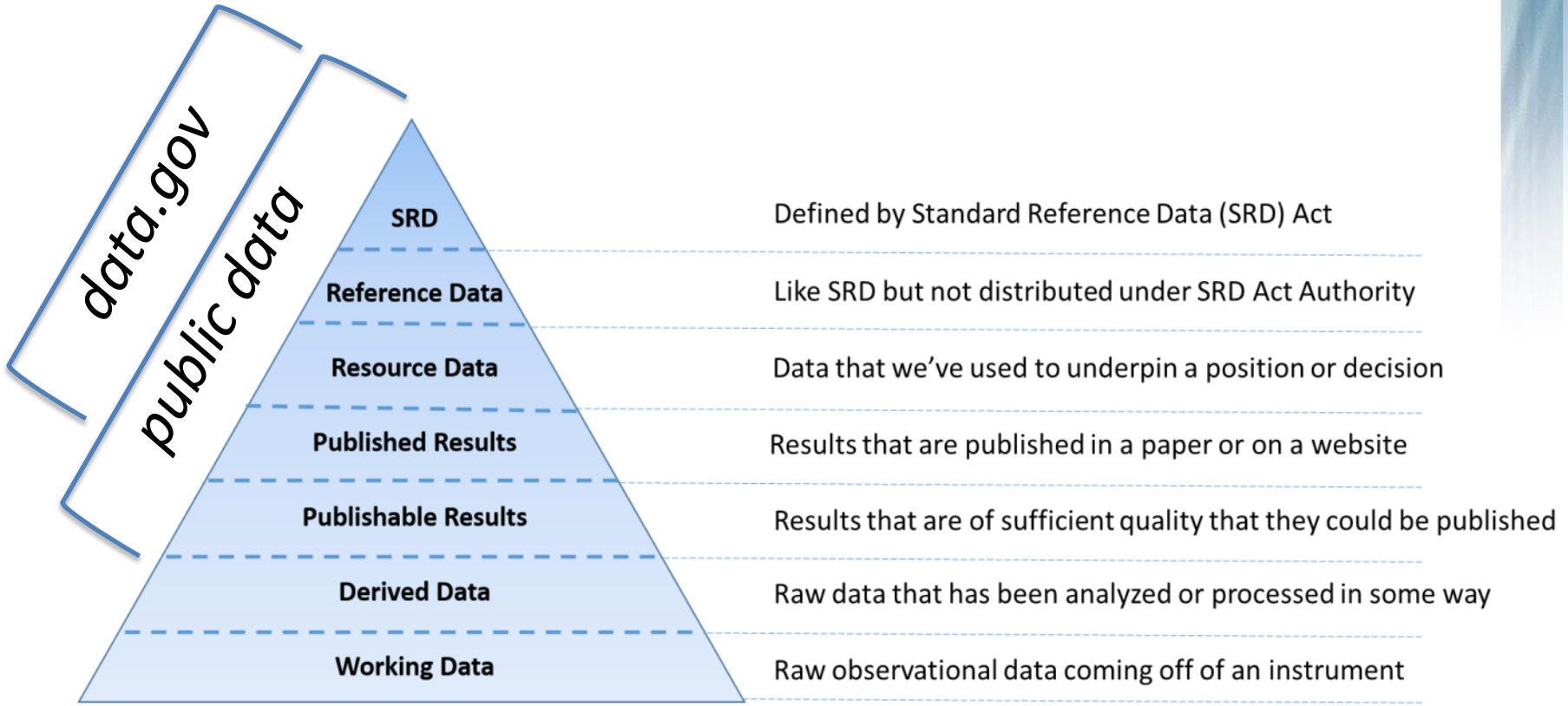
Robert Hanisch
Office of Data and Informatics
Material Measurement Laboratory
National Institute of Standards and Technology

NIST Public Data Access Policy

- Strengthen NIST's commitment to providing public access to scientific research results
- Support governance of and best practices for managing peer-reviewed scholarly publications and digital scientific data across NIST
- Ensure effective access to and reliable preservation of NIST peer-reviewed scholarly publications and digital scientific data for use in research, development, education, and scientific discovery
- Increase use to NIST research results to enhance scientific discovery, education, and research and development across the US
- Enhance innovation and competitiveness by maximizing the potential to create new business opportunities

<http://www.nist.gov/open/>

Data Categories



NIST Publications in PMC



Public Access

NIST peer-reviewed papers published on or after 1 October 2015 must be put into PMC within a year of publication. Technical reports go to GPO FDsys.

in
PMC

Search NIST articles in PMC

[Browse all NIST articles in PMC](#)

[Search all PMC articles](#)

This database includes peer-reviewed articles written by the staff of the National Institute of Standards and Technology that were published on or after October 1, 2015. Articles cover the full range of NIST work on topics such as quantum physics, materials research, analytical chemistry, computer security, manufacturing engineering, structural engineering, fire science, forensic science, nanotechnology, and biotechnology.

[Search for articles from the NIST website \(including articles published before 10/1/15 that may not be in PMC\)](#)

[About NIST](#) | [NIST's Public Access Plan](#)

NIST and PMC

PubMed Central (PMC) is a full-text, online archive of journal literature operated by the National Library of Medicine. The National Institute of Standards and Technology (NIST) is using PMC to permanently preserve and provide easy public access to

the peer-reviewed papers resulting from NIST-funded research. For more information about public access and other funders who use PMC, see [Public Access and PMC](#).

<http://www.ncbi.nlm.nih.gov/pmc/funder/nist/>

Hanisch, Data Citation Workshop, July 12, 2016

NIST Publications in PMC

NCBI Resources How To Sign in to NCBI

PMC US National Library of Medicine National Institutes of Health

PMC "nist funded"[Filter] Search

Save search Journal List Limits Advanced Help

Display Settings: Summary, 20 per page, Sorted by Default order

Send to: Filter your results:

Results: 1 to 20 of 819

<< First < Prev Page 1 of 41 Next > Last >>

All (819)

NIH grants (501)

Manage Filters

- [Antiperovskite Chalco-Halides \$Ba_3\(FeS_4\)Cl\$, \$Ba_3\(FeS_4\)Br\$, and \$Ba_3\(FeSe_4\)Br\$ with Spin Super-Super Exchange](#)
1. Xian Zhang, Kai Liu, Jian-Qiao He, Hui Wu, Qing-Zhen Huang, Jian-Hua Lin, Zhong-Yi Lu, Fu-Qiang Huang
Sci Rep. 2015; 5: 15910. Published online 2015 November 3. doi: 10.1038/srep15910
PMCID: PMC4630630
[Article](#) [PubReader](#) [PDF-1.1M](#) [Citation](#)
- [Survey statistics of automated segmentations applied to optical imaging of mammalian cells](#)
2. Peter Bajcsy, Antonio Cardone, Joe Chalfoun, Michael Halter, Derek Juba, Marcin Kocielek, Michael Majurski, Adele Peskin, Carl Simon, Mylene Simon, Antoine Vandecreme, Mary Brady
BMC Bioinformatics. 2015; 16: 330. Published online 2015 October 15. doi: 10.1186/s12859-015-0762-2
PMCID: PMC4608288
[Article](#) [PubReader](#) [PDF-1.6M](#) [Citation](#)
- [Histone post-translational modifications in frontal cortex from human donors with Alzheimer's disease](#)
3. Kyle W. Anderson, Illarion V. Turko
Clin Proteomics. 2015; 12: 26. Published online 2015 October 1. doi: 10.1186/s12014-015-9098-1
PMCID: PMC4591557
[Article](#) [PubReader](#) [PDF-1.4M](#) [Citation](#)
- [Electric-field-induced local and mesoscale structural changes in polycrystalline dielectrics and ferroelectrics](#)
4. Tedi-Marie Usher, Igor Levin, John E. Daniels, Jacob L. Jones
Sci Rep. 2015; 5: 14678. Published online 2015 October 1. doi: 10.1038/srep14678
PMCID: PMC4589771
[Article](#) [PubReader](#) [PDF-1.0M](#) [Citation](#)
- [Using mixtures of biological samples as process controls for RNA-sequencing](#)
5. Jerod Parsons, Sarah Munro, P. Scott Pine, Jennifer McDaniel, Michele Me
BMC Genomics. 2015; 16(1): 708. Published online 2015 September 17. doi: 10.1186/s12864-015-1810-1
PMCID: PMC4574543
[Article](#) [PubReader](#) [PDF-1.3M](#) [Citation](#)

Find related data

Database: Select

Find items

Search details

"nist funded"[Filter]

Search

See more...

Recent activity

Turn Off Clear

NIST publications will be discoverable through PMC, FDsys, CHORUS, nist.gov, Google Scholar, and publisher websites

Materials Science Data Repository

Login



NIST Repositories

Communities in NIST Repositories

Select a community to browse its collections.

- [ASM Structural Materials Data Demonstration Project](#)
- [CHiMaD Data Collections](#)
- [Computational File Repository](#)
- [Experimental Data Repository](#)
- [Genome in a Bottle](#)
- [Heusler Phases: First Principles Simulations](#)
- [ICME Approach to Development of Lightweight 3GAHSS Vehicle Assembly](#)
- [ICME of Carbon Fiber Composites for Lightweight Vehicles](#)
- [MGI Catalogs](#)
- [NanoRelease](#)
- [NIST/DOE-EERE Advanced Automotive Cast Magnesium Alloys](#)
- [NIST Thermodynamics and Kinetics Test Space](#)
- [RDA Demonstration Project: DTR/PID & MGI Infrastructure](#)
- [Synchrotron Studies of Slot Die Coated Films](#)
- [Thermal Conductivity of CVD Diamond - DARPA Round Robin](#)
- [TMS Springer Integrating Materials and Manufacturing Innovation \(IMMI\)](#)

Recently Added

[Al-Cu Symmetric/Asymmetric Tilt Grain Boundary Dataset](#)

Tschopp, Mark A.; Coleman, Shawn P.; McDowell, David L.

Symmetric and asymmetric tilt grain boundaries in Cu and Al were generated using molecular statics energy minimization in LAMMPS with in-plane grain boundary translations and an atom deletion criterion. The following ...

Search NIST Repositories

[Advanced Search](#)

Browse

All of NIST Repositories
[Communities & Collections](#)
[By Issue Date](#)
[Authors](#)
[Titles](#)
[Subjects](#)

My Account

[Login](#)

Discover

Author

[Du, Y.](#) (10)
[Burton, Benjamin P.](#) (7)
[Xu, Honghui](#) (7)
[Zhang, L.](#) (7)
[Liu, Shuhong](#) (6)
[Li, Changrong](#) (5)
[Du, Zhenmin](#) (4)
[Guo, Cuiping](#) (4)
[Liu, Z.-K.](#) (4)
[van de Walle, Axel](#) (4)
[... View More](#)

Subject

Materials
Genome
Initiative

- Experiment
- Computation
- Data

<http://materialsdata.nist.gov/>

Hanisch, Data Citation Workshop, July 12, 2016

Materials Science Data Repository

DSpace

(repositories, disciplines, industries) (data, models, integration, etc.)

NIST File Repositories → NIST Data File Repositories → CALPHAD Assessments

CALPHAD Assessments

Search D Space

NIST File Repositories → NIST Data File Repositories → CALPHAD Assessments → View Item

Browse by

- By Issue Date
- Authors
- Titles
- Subjects

Search within this collector

Submit a new item to this coll

Recent Submissions

AI_Cr_Ni Diffusion Mobilities
Campbell, C.E. (2013-02-11)
This work presents the assessed phases in the Ni-Al-Cr system. Available experimental ...

Ni-Al-Cr system Thermodyna
Dupin, N.; Ansara, I.; Sundma A. re-assessment of the ternary energy function for the gamma experimental liquidus tempera

Aq-AI Functional Descriptor
Du, Zeting; Jing, Zhan-Peng; I The energy expressions for G ones, are established by con energy and the ...

Data Citation:
AI_Cr_Ni Diffusion Mobilities in Gamma Prime and B2
Campbell, C.E.
<http://hdl.handle.net/11115/51> **Persistent Identifier**

Publication Citation:
Campbell, C.E. "Assessment of the diffusion mobilities in the gamma prime and B2 phases Ni-Al-Cr system," *Acta Mater.* 2008;56:4277.
<http://dx.doi.org/10.1016/j.actamat.2008.04.051>

Related Work:
Dupin, N., Ansara, I., Sundman B. "Thermodynamic Re-Assessment of the Ternary System Ni-Al-Cr CALPHAD 2001;25:279. Publication: [http://dx.doi.org/10.1016/S0364-5916\(01\)00049-9](http://dx.doi.org/10.1016/S0364-5916(01)00049-9)
<http://hdl.handle.net/11115/10088>

Similar Work:
Zhang, L., Du, Y., Chen, Q., Steinbach, I., "Atomic mobilities and diffusivities in the fcc, L12 and B2 of the Ni-Al system," *International Journal of Materials Research*, 2010:1461. <http://dx.doi.org/10.1464.110428>

Abstract:
This work presents the assessment of the diffusion mobilities in both the γ' (Ni₃Al-L12) and B2 phases in the Ni-Al-Cr system utilizing the phenomenological model developed by Helander and Available experimental tracer diffusivity, interdiffusion coefficients and activation energies evaluated and then used to optimize the composition- and temperature-dependent diffusion mo For both the B2 and γ' phases, the assessed diffusion mobility descriptions reproduce the Arr temperature dependence for the Ni, Al and Cr tracer diffusivities and interdiffusion coefficient assessment reproduces the strong composition dependence of the diffusivities in the B2 observed experimentally. The measured composition dependences of the diffusivities in the γ' phase also replicated by the present mobility descriptions. The assessed mobility descriptions are valid comparing calculated and measured composition profiles for a variety of Ni-Al and Ni-Al-Cr diffusion couples, including B2/B2, γ (fcc)/ γ' and γ /B2 couples

Files in this item

	Name: exp-b2.zip Size: 9.374Kb Format: application/zip Description: Experimental data for NiAl B2 phase	View/Open
	Name: exp-ni3al.zip Size: 9.619Kb Format: application/zip Description: Experimental diffusion data files for NiAl	View/Open
	Name: alcrni-mob-NIST-0 ... Size: 57.23Kb Format: application/tdb Description: Diffusion mobility description for Ni-Al-Cr using N. Dupin thermodynamics (CALPHAD 2001)	View/Open
	Name: Re-assessment-112 ... Size: 237.1Kb Format: PDF Description: Explanation of revision to published diffusion mobility description	View/Open

The following license files are associated with this item:

- [Creative Commons](#)

This item appears in the following collections:

- [CALPHAD Assessments](#)

Offer licenses with attribution 3.0

Open Access to Research (OAR)

- Program dedicated to improving public access to NIST research data outputs
- Management of Institutional Data Assets (MIDAS) tool
 - Data management plans
 - Resulting data described in Enterprise Data Inventory (EDI)
 - Project Open Data schema <https://project-open-data.cio.gov/v1.1/schema/> with extensions
 - All public-facing NIST data
 - All published data objects assigned DOIs
 - JSON records uploaded to Dept. of Commerce, data.gov
- Data repository and discovery portal
 - Integrated search across all NIST public data assets
 - Likely to use Fedora-based repository

NIST Data Citation Guidance

Cite NIST Datasets

NVL Quick Links

- About ISO
- Article and Research Databases
- NVL Electronic Resources
- Journal of Research of NIST
- Lab Liaisons
- Library Board
- Library Catalog
- NIST Digital Archives
- NIST Technical Series Publications
- Museum

Find NVL Content

- News
- How Do I
- Services

Contact ISO

Information Desk:
301-975-3052 Phone
301-975-6793 Fax
reflib@nist.gov Lync (IM)
library@nist.gov

Description

Journals often have their own citing format for publications and other items included in article reference lists. NIST's data citation recommendations are consistent in using the same citation elements (author, title, publisher, year of publication, etc.) as used by journals. In the absence of other (e.g., journal) defined requirements, these recommendations provide a consistent manner for appropriate attribution to scientific datasets that are made available under NIST's public access policy.

The following minimum requirements and format should be used to cite NIST datasets (a URL is used if a PID is not available):

Recommended Format:

Author/editor (Publication Year), Title, Publisher, Persistent Identifier (PID) or URL (Access date)

Example:

D.W. Siderius, V.K. Shen, R.D. Johnson III, R.D. van Zee, eds. (2013), NIST/ARPA-E Database of Novel and Emerging Adsorbent Materials, NIST Standard Reference Database 205, National Institute of Standards and Technology, <http://adsorbents.nist.gov> (Accessed December 1, 2014)

It may also be desirable to include information from two optional properties, Version and Type of Medium, as appropriate. If so, the recommended format with NIST example is as follows:

Recommended Format:

Author/editor (Publication Year), Title, Version, Publisher, [Type of Medium] Persistent Identifier (PID) or URL (Access date)

Example:

J.E. Sansonetti, W.C. Martin, and S.L. Young (2005), NIST Basic Atomic Spectroscopic Data, NIST Standard Reference Database 108, Version 1.1.2, National Institute of Standards and Technology, [Online] <http://www.nist.gov/pml/data/handbook/> (Accessed May 26, 2015)

Contributors

- Katherine Sharpless, NIST Open Data Officer
- Del Brockett, NIST CIO
- Anita Vanek, Jim Fowler, NIST Office of Information Systems Management
- Gretchen Greene, Ray Plante, Chandler Becker, Casey Hume, NIST Office of Data and Informatics
- Kim Tryka, Andrea Medina-Smith, Regina Avila, NIST Information Services Office (NIST Research Library)
- Jim Warren, Carrie Campbell, NIST Materials Genome Initiative
- And many others...