Google-scholar API

Dr. H

Source:: Content modified from https://pypi.org/project/scholarly/

```
conda install -c conda-forge scholarly
```

Python generators (aside)

A Python generator is an iterable construct that produces values one at a time, using the `yield` keyword, conserving memory and enabling efficient processing of large datasets.

- **Iterable**: Generates values on-the-fly during iteration.
- **Memory-Efficient**: Stores values in memory temporarily, reducing memory usage.
- **Declared with "yield"**: Uses "yield" to yield values from a function.
- **Stateful**: Maintains its state between successive calls.
- **Lazy Evaluation**: Computes values when needed, improving performance.
- **Suitable for Large Data**: Ideal for processing large datasets efficiently.
- **Generator Expressions**: Can be defined using concise generator expressions.
- **Enhances Code Readability**: Simplifies complex iteration tasks in a readable manner.

Important commands:

- The `next` command in Python is used to retrieve the next value generated by a generator, advancing its internal state.
- The `yield` keyword in Python is used within a function to produce a value and temporarily suspend execution, allowing the generator to continue from where it left off when iterated.

Example: Author search

- Code

```
<class 'generator'>
----------------------------------
info= {
    "affiliation": "Professor of Economics at University of Chicago, American Bar Foundation Research Fellow",
    "citedby": 242561,
    "container_type": "Author",
    "email_domain": "@uchicago.edu",
    "filled": [],
    "interests": [
        "labor economics",
        "microeconomics",
        "soft skills",
        "early childhood development",
        "personality psychology"
    ],
    "name": "James Heckman",
    "scholar_id": "7EelTwgAAAAJ",
    "source": "SEARCH_AUTHOR_SNIPPETS",
    "url_picture": "https://scholar.google.com/citations?view_op=medium_photo&user=7EelTwgAAAAJ"
}
----------------------------------
info= {
```

Author information

- Code

```
info= {
    "affiliation": "NIST",
    "citedby": 222,
    "citedby5y": 218,
    "cites_per_year": {
        "2016": 2,
        "2017": 2,
        "2018": 12,
        "2019": 17,
        "2020": 42,
        "2021": 52,
        "2022": 57,
        "2023": 38
    },
    "coauthors": [
        {
            "affiliation": "Professor of Physics, George Mason University",
            "container_type": "Author",
            "filled": [],
            "name": "Yuri Mishin",
            "scholar_id": "cfCUXJAAAAAJ",
            "source": "CO_AUTHORS_LIST"
```

Publication information

▶ Code


```
info= {
    "author_pub_id": "5Gjl4o8AAAAJ:vRqMK49ujn8C",
    "bib": {
        "citation": "Nature communications 9 (1), 4102, 2018",
        "pub_year": "2018",
        "title": "Nickel nanoparticles set a new record of strength"
    },
    "citedby_url": "https://scholar.google.com/scholar?oi=bibs&hl=en&cites=12432703383607468660",
    "cites_id": [
        "12432703383607468660"
    ],
    "container_type": "Publication",
    "filled": false,
    "num_citations": 71,
    "source": "AUTHOR_PUBLICATION_ENTRY"
}
```


▶ Code


```
info= {
    "author_pub_id": "5Gjl4o8AAAAJ:u-x6o8ySG0sC",
    "bib": {
        "citation": "Physical Review B 94 (18), 184311, 2016",
        "pub_year": "2016",
        "title": "Temperature fluctuations in canonical systems: Insights from molecular dynamics simulations"
    },
    "citedby_url": "https://scholar.google.com/scholar?oi=bibs&hl=en&cites=7441510995791054390",
    "cites_id": [
        "7441510995791054390"
    ],
```

```
    "container_type": "Publication",
    "filled": false,
    "num_citations": 32,
    "source": "AUTHOR_PUBLICATION_ENTRY"
}
```


▶ Code


```
info= {
    "author_pub_id": "5Gjl4o8AAAAJ:u-x6o8ySG0sC",
    "bib": {
        "abstract": "Molecular dynamics simulations of a quasiharmonic solid are conducted to elucidate the
meaning of temperature fluctuations in canonical systems and validate a well-known but frequently contested
equation predicting the mean square of such fluctuations. The simulations implement two virtual and one physical
(natural) thermostat and examine the kinetic, potential, and total energy correlation functions in the time and
frequency domains. The results clearly demonstrate the existence of quasiequilibrium states in which the system
can be characterized by a well-defined temperature that follows the mentioned fluctuation equation. The
emergence of such states is due to the wide separation of time scales between thermal relaxation by phonon
scattering and slow energy exchanges with the thermostat. The quasiequilibrium states exist between these two
time scales when the system behaves as virtually isolated and \u2026",
        "author": "J Hickman and Y Mishin",
        "citation": "Physical Review B 94 (18), 184311, 2016",
        "journal": "Physical Review B",
        "number": "18",
        "pages": "184311",
        "pub_year": 2016,
        "publisher": "American Physical Society",
        "title": "Temperature fluctuations in canonical systems: Insights from molecular dynamics simulations",
        "volume": "94"
    },
```

Publication titles

▶ Code

```
*  Nickel nanoparticles set a new record of strength
*  Temperature fluctuations in canonical systems: Insights from molecular dynamics simulations
*  Extra variable in grain boundary description
*  Disjoining potential and grain boundary premelting in binary alloys
*  Development of a general-purpose machine-learning interatomic potential for aluminum by the physically
informed neural network method
*  Thermal conductivity and its relation to atomic structure for symmetrical tilt grain boundaries in silicon
*  The impact of alloying on defect-free nanoparticles exhibiting softer but tougher behavior
*  Energy spectrum of a Langevin oscillator
*  Coarsening of solid β-Sn particles in liquid Pb-Sn alloys: Reinterpretation of experimental data in the
framework of trans-interface-diffusion-controlled coarsening
*  Coarsening of Solid Particles in Liquid Pb-Sn Alloys: Reinterpretation of Data in Light of the TIDC Theory of
Coarsening
*  Softer but tougher: The impact of alloying on defect-free nanoparticles
*  Physically-Informed Artificial Neural Networks for Atomistic Modeling of Materials
*  Investigations of Interface Phenomena via Atomistic Simulation
*  Atomistic modeling of pre-melted grain boundaries
*  Fairfax, Virginia 22030-4444 USA Vidvuds Ozoliņš Department of Applied Physics Energy Sciences Institute
*  Atomistic modeling of grain boundary melting and premelting in alloys
```

Publication citations

▶ Code

```
Temperature fluctuations in canonical systems: Insights from molecular dynamics simulations
*  Temperature in and out of equilibrium: A review of concepts, tools and attempts
*  Local temperatures out of equilibrium
*  Assessment of mechanical, thermal properties and crystal shapes of monoclinic tricalcium silicate from
atomistic simulations
*  Demystifying the success of empirical distributions in space plasmas
*  Atomistic investigation on the conversion of plastic work to heat in high-rate shear deformation
*  Thermal conductivity and its relation to atomic structure for symmetrical tilt grain boundaries in silicon
*  Coexistence of two types of short-range order in Si–Ge–Sn medium-entropy alloys
*  Temperature and its control in molecular dynamics simulations
*  Study on Nanoporous Graphene-Based Hybrid Architecture for Surface Bonding
*  Fundamental thermal noise limits for optical microcavities
*  Fluctuating temperature outside superstatistics: Thermodynamics of small systems
*  Efficient determination of solid-state phase equilibrium with the multicell Monte Carlo method
*  Novel molecular-dynamics-based protocols for phase space sampling in complex systems
*  Deciphering the 'Elixir of Life': Dynamic perspectives into the allosteric modulation of mitochondrial ATP
synthase by J147, a novel drug in the treatment of Alzheimer's …
*  Fluctuation theorems in q-canonical ensembles
*  Computational study on surface bonding based on nanocone arrays
*  Vibrational Behavior of Water Adsorbed on Forsterite (Mg2SiO4) Surfaces
*  Energy spectrum of a Langevin oscillator
*  On the elaboration of the next generation of thermodynamic models of solid solutions
```