MCP SERVER | NO CODE | CLOUD HOSTED

OpenAlex MCP

Analyze global research trends & metrics

OpenAlex connects your AI agent to 250M+ scholarly works, giving you a free alternative to expensive database platforms like Scopus or Web of Science. Search papers, map institutional research output, and track author impact using open bibliometric data. It's the world's largest catalog for tracking academic knowledge.

A+ Quality Score 100/100

bibliometrics | academic-research | citation-analysis | open-access | research-trends | data-discovery

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vinkius.com/mcp/openalex

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

OpenAlex MCP

5 tools available
Cloud-hosted on Vinkius

This MCP lets your agent access a comprehensive, freely licensed library of over 250 million scholarly works. Instead of piecing together research insights from multiple paid services, you can ask one question and get answers derived from deep bibliometric data. You can quickly find details on any paper using its OpenAlex ID or DOI. It also helps map out the impact of entire institutions, showing which universities or labs are leading research in specific fields globally. Want to know what topics the scientific community is focusing on right now? The system tracks global trends and lets you profile individual researchers, providing metrics like total citations and h-index scores. When your agent processes this data through Vinkius, it brings together complex scholarly information into clear, usable insights for anyone in research or academia.

Core Capabilities

01 — Search specific academic works

Get full metadata details on any single paper using its unique OpenAlex ID or DOI.

02 — Profile researchers' impact

Find authors worldwide and review their total publication counts, citation metrics, h-index scores, and current affiliations.

03 — Map institutional research output

Explore the collective body of work for universities, hospitals, or labs, seeing where they publish and their global focus areas.

04 — Identify emerging scientific topics

Discover the most researched concepts globally by viewing topics ranked by the total number of published works.

05 — Verify open access status

Determine instantly if a scholarly work is open access (green, gold, hybrid, or bronze) for full-text availability assessment.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/openalex** — connect your AI agent in three steps.

01 Subscribe to this MCP and provide your free OpenAlex API key.

02 Your AI client sends a request—for instance, asking about the top institutions in genetics.

03 The MCP executes the search across 250M+ records and returns structured data containing publication counts, citation metrics, and research concepts.

The bottom line is that your agent gets highly specialized academic data without needing to manually query multiple databases.

Built For

This MCP serves researchers, librarians, and policy analysts who need deep, reliable scholarly metrics. It's for the academics tired of paying high fees just to check a few citation counts or map out institutional output.

Academic Researcher

Runs comparative bibliometric analyses on multiple fields without needing expensive, costly database subscriptions.

University Librarian

Monitors the overall research output and tracks citation metrics for specific departments or international collaborations.

Science Policy Analyst

Analyzes global trends, tracking which scientific concepts are receiving the most funding attention across different countries.

What Changes When You Connect

01 Instantly check open access status. When you search for papers, the tool tells you if the full text is available (green, gold, hybrid, or bronze), saving time on manual checks.

02 Track author impact effortlessly. The MCP gives researchers their total citation count and h-index score with a single query, letting them prove scholarly impact quickly.

03 Map global research power. Need to know which universities lead in biomedicine? Use the institution search tool to see publication counts and top concepts for any country or lab.

04 Identify market gaps. Instead of guessing where science is going, check global research trends to find the most studied topics—like Large Language Models or CRISPR applications.

05 Deep dive into papers. If you have a DOI, use the dedicated tool to pull every piece of metadata on that paper, including its reconstructed abstract and all authors' affiliations.

Real-World Applications

Evaluating institutional research capacity

A university administrator needs to fund a new department. They ask their agent to run the search_openalex_institutions tool for 'Biotechnology.' The resulting metrics provide citation counts, publication totals, and top concepts, allowing them to justify funding based on hard data.

Assessing an author's reputation

A hiring committee reviews a candidate. They ask their agent to search_openalex_authors for the name. The result immediately shows the person's h-index and total citations, giving instant insight into their global academic standing.

Researching a new field of study

A scientific journalist wants to write an article on AI ethics. They use get_openalex_trending_topics to identify the top five emerging concepts, ensuring their article covers what the academic world is most focused on right now.

Comparing competing papers

A student has two candidate papers for a thesis. They use get_openalex_work with both DOIs to pull comprehensive metadata, compare citation counts, and check the open access status before starting their literature review.

Patterns to Avoid

Trying to find all author data in one place

✗ AVOID

Copying a list of 10 authors from Google Scholar and pasting them into an AI prompt asking for metrics. The AI will fail because the data is unstructured.

✓ INSTEAD

Instead, use the search_openalex_authors tool for each person individually or run a targeted search_openalex_works query to gather all required citation metrics accurately.

Assuming relevance from one paper

✗ AVOID

Reading an abstract and assuming that only authors from that single institution are competent in the field. This overlooks global collaboration.

✓ INSTEAD

Use search_openalex_institutions to map out all competing centers of research, getting a complete picture of which organizations worldwide contribute to the topic.

Comparing institutions based on size only

✗ AVOID

Judging an institution's worth solely by its total number of published works. This ignores citation quality or specialized focus.

✓ INSTEAD

Use search_openalex_institutions to view the full metrics, including country and top research areas, for a balanced assessment.

The Right Fit

Use this MCP if your primary need is structured, quantitative academic data—specifically citation counts, h-index scores, or global trend mapping. You should use it when you need to replace the functionality of proprietary databases like Web of Science or Scopus with a free, comprehensive alternative.

Don't use this MCP if you simply need general information about an author (e.g., their professional LinkedIn summary) or qualitative synthesis that doesn't rely on specific metrics. If your goal is pure idea generation without data grounding, another tool set might be better suited. However, if the core of your query involves 'who published what,' 'how often was it cited,' or 'what are the top emerging topics,' this MCP is essential.

Tracking academic impact used to feel like a scavenger hunt.

Right now, if you want to track an author's full career or compare two research institutions, you end up jumping between multiple paid platforms and databases. You copy citation counts here, paste publication lists there, then manually cross-reference institutional affiliations in a third tab. It’s slow, expensive, and exhausting.

With this MCP, your agent handles the complexity behind the scenes. Instead of manual data collection across half a dozen sites, you ask one question—like 'What are the top research areas for MIT?'—and get comprehensive bibliometric results immediately.

OpenAlex provides instant author and institution metrics.

You don't have to manually run separate searches for h-index, total citations, and current affiliation. The MCP aggregates all this information into a single profile view for both authors and organizations.

It means you stop guessing at research impact. You start working with definitive, standardized metrics sourced from the world’s largest open catalog.

OpenAlex: Research Data Access (5 Tools)

These tools let you perform deep academic queries, ranging from checking individual paper details to mapping global research trends across millions of scholarly records.

#	TOOL	DESCRIPTION
01	`get_openalex_work`	Retrieves all available details for a specific academic paper using its OpenAlex ID or DOI.
02	`search_openalex_authors`	Finds researchers and returns their total works count, citation metrics, h-index score, and affiliations.
03	`search_openalex_institutions`	Maps research institutions globally, showing their publication counts, country code, and top research areas.
04	`search_openalex_works`	Searches the entire database of 250M+ works, returning titles, authors, citation counts, and open access status.
05	`get_openalex_trending_topics`	Identifies and reports on the most researched scientific topics and concepts globally right now.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U Which institutions publish the most research on quantum computing worldwide?

Top institutions for quantum computing: MIT (2,400+ works, 180K citations), Stanford University (1,800+ works), University of Waterloo (1,500+ works), ETH Zurich (1,200+ works), and Google DeepMind (800+ works). Each result includes citation metrics, country code, and top research concepts.

U Search for Geoffrey Hinton and show me his publication metrics and affiliations.

Found: Geoffrey Hinton — University of Toronto / Google Brain. Works: 650+, Citations: 750,000+, h-index: 183. Top concepts: Machine Learning, Neural Networks, Deep Learning, Artificial Intelligence. His most cited work: 'ImageNet Classification with Deep Convolutional Neural Networks' (2012) with 120,000+ citations.

U What are the most researched scientific topics globally right now?

Top 5 research topics by published works: 1) Medicine (45M+ works, 1.2B citations), 2) Biology (35M+ works), 3) Chemistry (30M+ works), 4) Computer Science (20M+ works), 5) Physics (18M+ works). At the granular level, trending sub-topics include: Large Language Models, mRNA therapeutics, CRISPR applications, and climate modeling.

Frequently Asked Questions

01 **How do I find papers on OpenAlex using only a DOI?**

You use the get_openalex_work tool. Simply input the Digital Object Identifier (DOI), and the MCP will return all metadata for that specific academic paper.

02 **Does OpenAlex help me see what research topics are popular?**

Yes, run the get_openalex_trending_topics tool. This function identifies the most researched scientific concepts globally by showing you how many works have been published in each area.

03 **Can I use OpenAlex to check if a paper is open access?**

Yes, when searching for works using search_openalex_works, the tool returns the open access status (green, gold, hybrid, bronze) for immediate assessment.

04 **What metrics does OpenAlex provide for authors?**

The search_openalex_authors tool provides a full profile including total works count, cumulative citation counts, and the important h-index metric.

05 **Is OpenAlex better than Scopus for academic analysis?**

OpenAlex is an open-source alternative to expensive platforms. It gives you access to comparable bibliometric data—like institutional output and citation metrics—without the high subscription cost.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"openalex": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

OpenAlex is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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