Supporting research integrity: indicating article status from any point of discovery

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Company focus: LibKey intelligent access

Article level intelligence

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Expert AI system for intelligent source selection

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Impact of a One-to-One iPad Initiative on Grade 7 Students' Achievement in Language Arts, Mathematics, and Learning Skills

Fastest, most reliable, informed linking

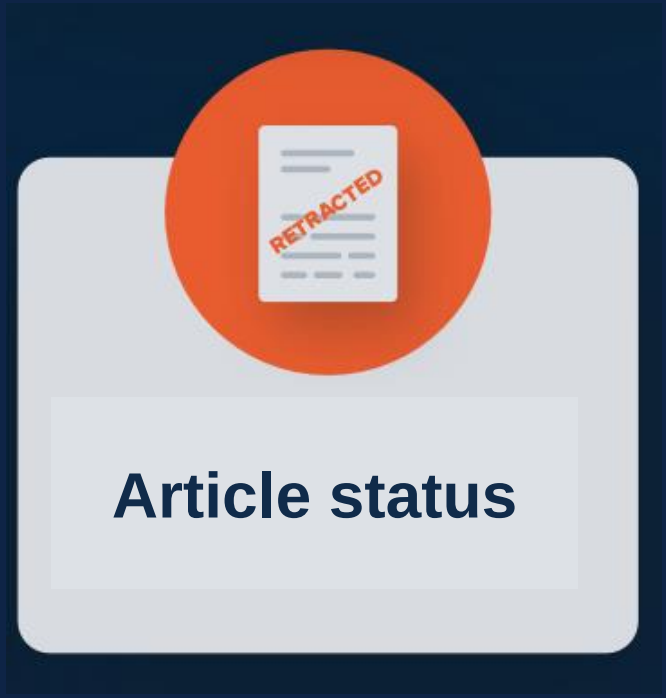
Article level intelligence

The “best source”

- Real time analysis of all available sources
- Use AI expert system to determine the “best source”
- Best source versus all sources approach improves overall linking reliability

Universal application

Article level intelligence: article status

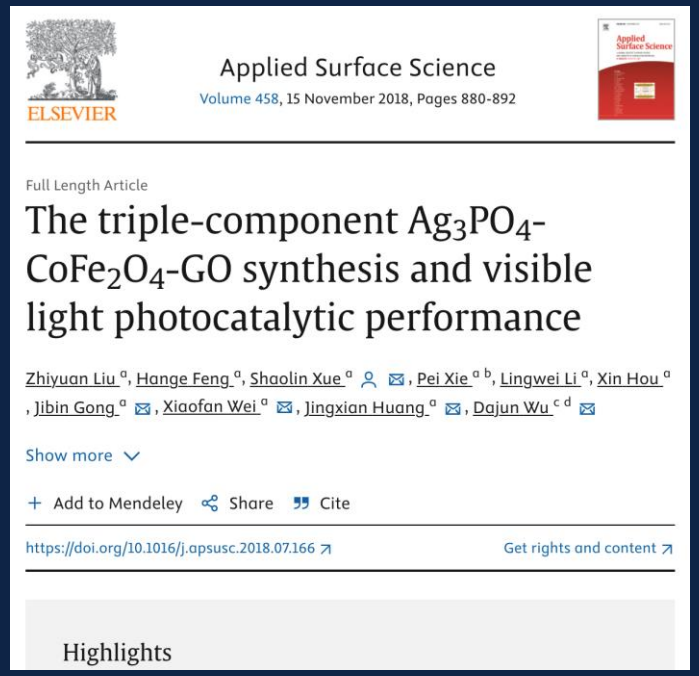


Significant concerns over proliferation of poor scholarship through the citation of articles that have been retracted, labeled with an expression of concern, or published in problematic journals

Article status: first order retraction

- Steady growth of article retractions over the last year, a record 14,000 last year (compared to 1,000 in 2009)
- Retraction identification has become better but is still uneven
- User awareness depends on article retrieval date, point of discovery and other factors
- Citation leads to "pollution" in the scholarly record

"Feet of clay": second order retraction



ELSEVIER

Applied Surface Science

Volume 458, 15 November 2018, Pages 880-892

Full Length Article

The triple-component Ag_3PO_4-$CoFe_2O_4$-GO synthesis and visible light photocatalytic performance

Zhiyuan Liu [a], Hange Feng [a], Shaolin Xue [a], Pei Xie [a b], Lingwei Li [a], Xin Hou [a], Jibin Gong [a], Xiaofan Wei [a], Jingxian Huang [a], Dajun Wu [c d]

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Highlights

Cited references

"Although the act of retracting flawed articles helps purge the scientific literature of erroneous or unethical research, citations to such research after it's been retracted, *presents a real challenge to the integrity of the scientific endeavor*."

Bar-Ilan J, Halevi G. Post retraction citations in context: a case study. Scientometrics. 2017;113(1) 547-656

10 most highly cited retracted articles

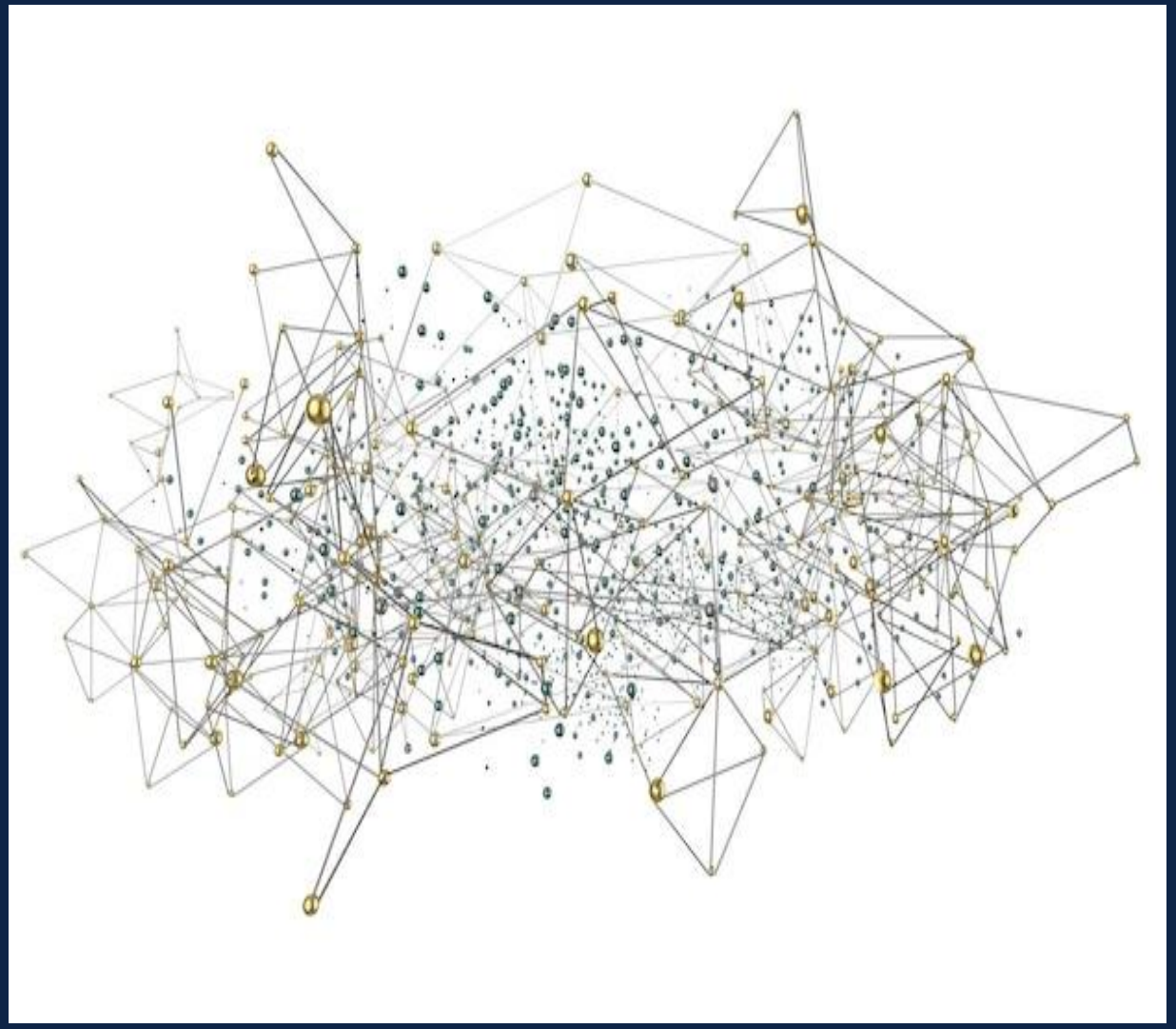
Article	Year of Retraction	Citations Before Retraction
Pluripotency of mesenchymal stem cells derived from adult. Nature. June 20, 2002.	2024	4482
6-month consequences of COVID-19 in patients discharged from hospital: a cohort study. Lancet. January 8, 2021.	2023	2250
Primary Prevention of Cardiovascular Disease with a Mediterranean Diet. New England Journal of Medicine. April 4, 2013	2018	1695
A specific amyloid-β protein assembly in the brain impairs memory. Nature. March 16, 2008	2024	2348
Predictive Validity of a Medication Adherence Measure in an Outpatient Setting. The Journal of Clinical Hypertension. May 2, 2008.	2023	1929
MicroRNA signatures of tumor-derived exosomes as diagnostic biomarkers of ovarian cancer. Gynecologic Oncology. June 25, 2008	2023	1865
Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. Lancet. February 28, 1998	2010	542
Recent progress in processing and properties of ZnO. Progress in Materials Science. May 28, 2004	2020	1550
Visfatin: A protein secreted by visceral fat that mimics the effects of insulin. Science. January 21, 2005	2007	232
An enhanced transient expression system in plants based on suppression of gene silencing by the p19 protein of tomato bushy stunt virus. Plant Journal. February 28, 2003	2015	895

Problematic journals

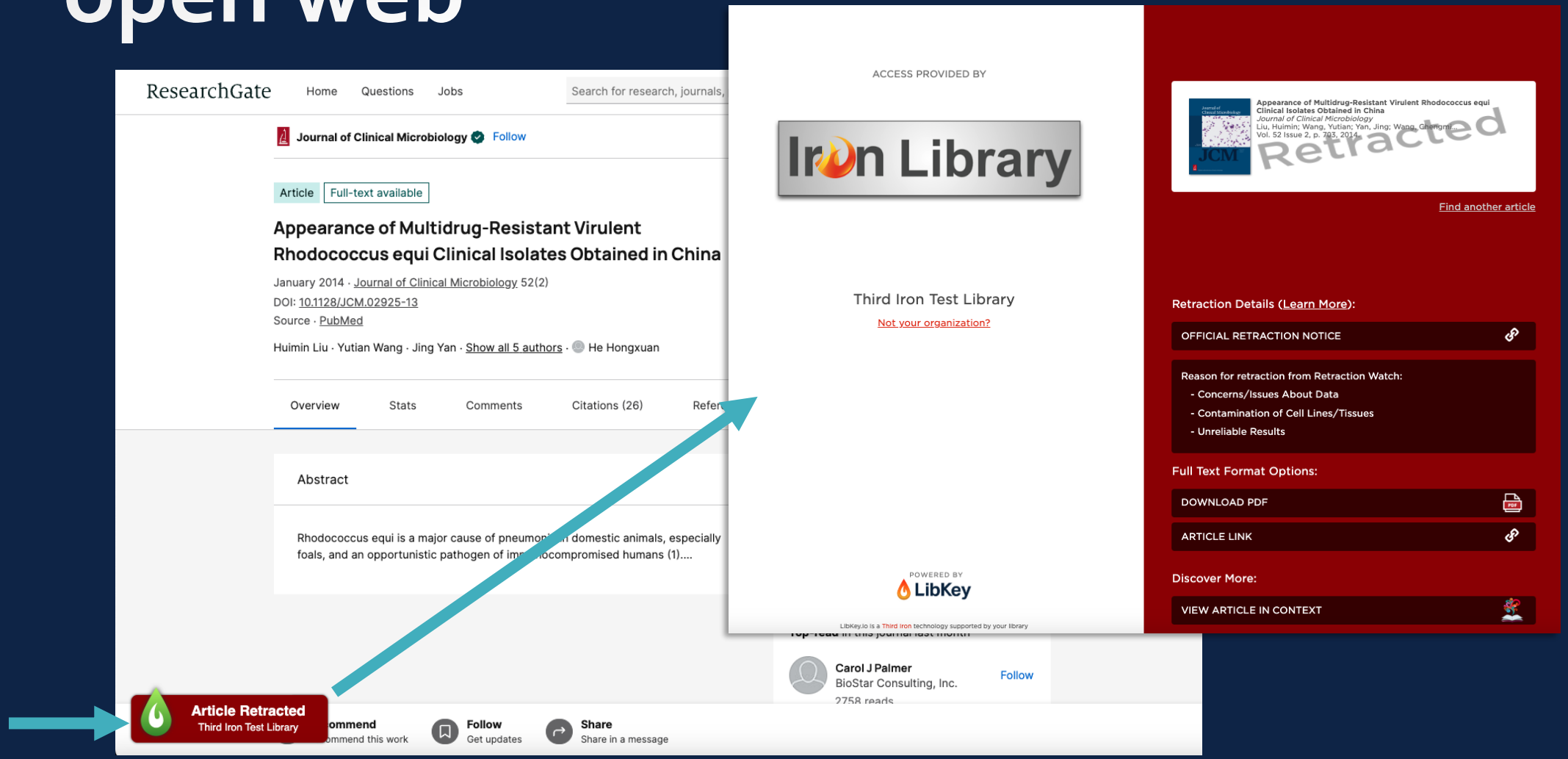
- Lack of peer review
- Profit driven
- Harm to academic careers
- Misinformation

Third Iron: detailed article status data

- Consulting multiple data sources
- Editorially managing article metadata for consistent identification
- Connecting first order retractions to citations to create second order retraction map
- Updated daily
- Partnering with Cabells to inform users of problematic journal status



First order retraction notification – open web



First order retraction notification – library services

1

ARTICLE

Myostatin Induces Insulin Resistance via Casitas B-Lineage Lymphoma b (Cblb)-mediated Degradation of Insulin Receptor Substrate 1 (IRS1) Protein in Response to High Calorie Diet Intake

Bonala, Sabeera ; Lokireddy, Sudarsanareddy ; McFarlane, Craig ; Patn…

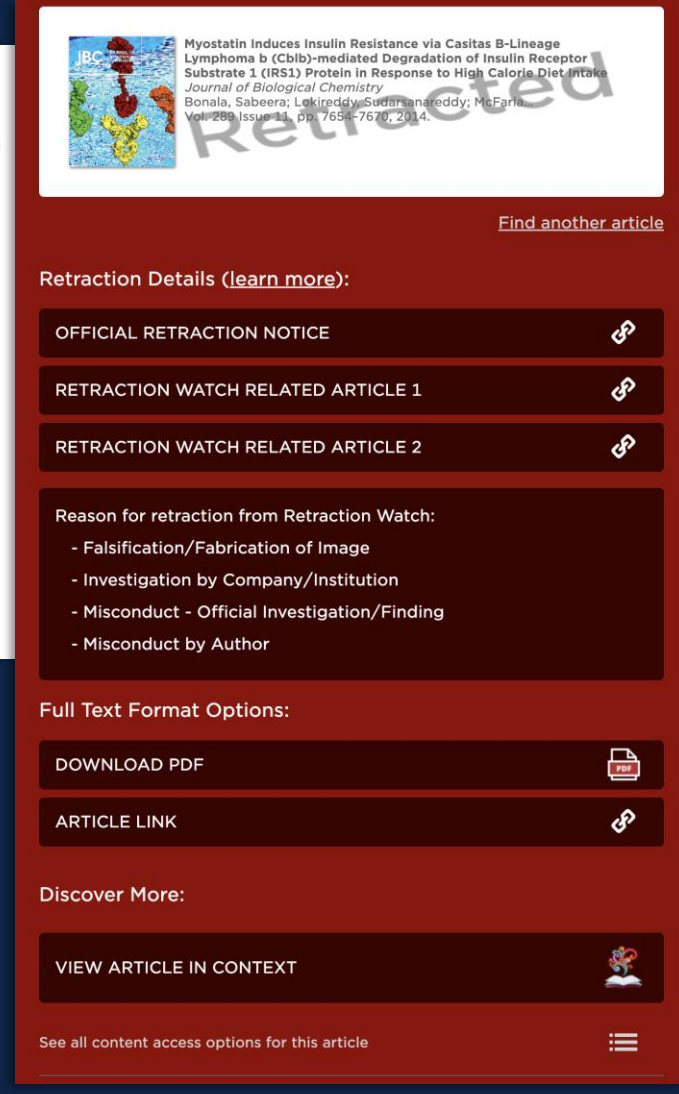
United States: Elsevier Inc

The Journal of biological chemistry, 2014, Vol.289 (11), p.7654-7670

PEER REVIEWED OPEN ACCESS

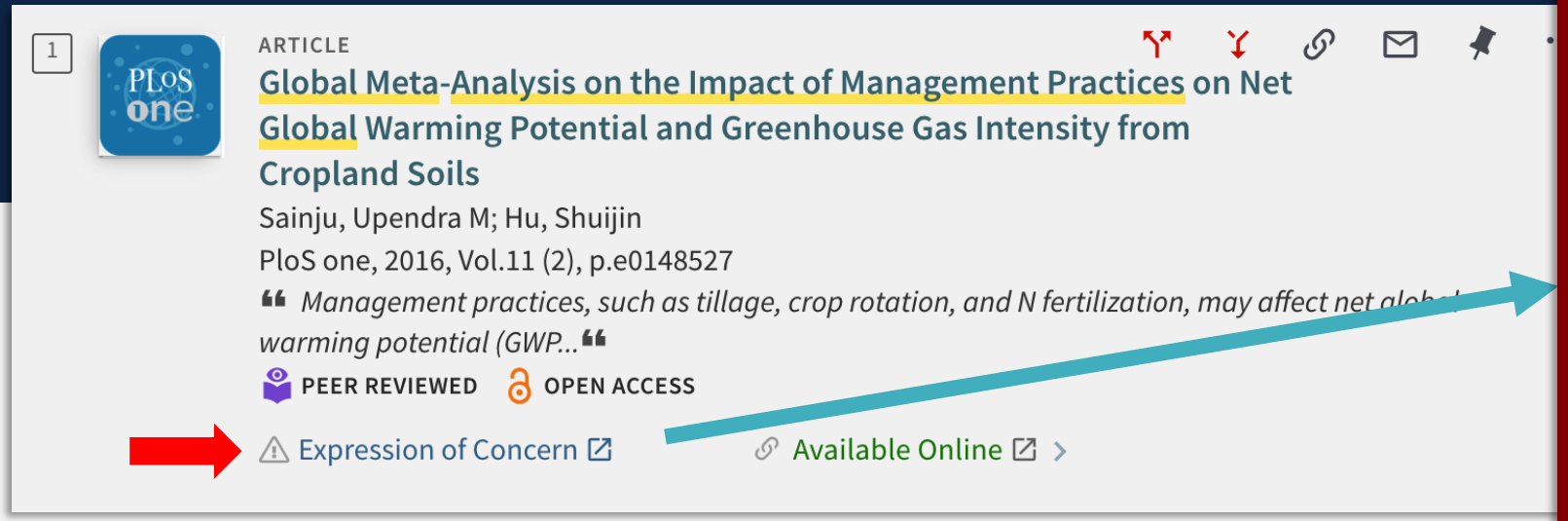
Retracted Article

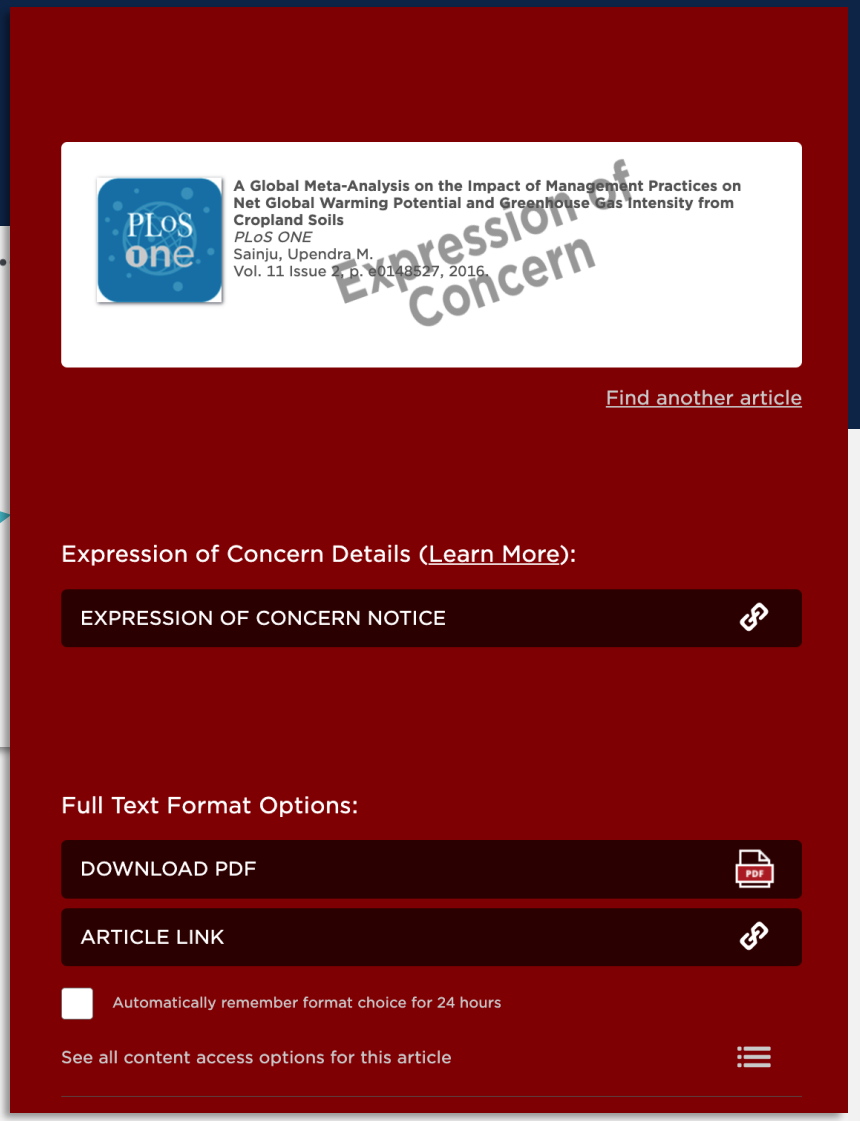
Online access



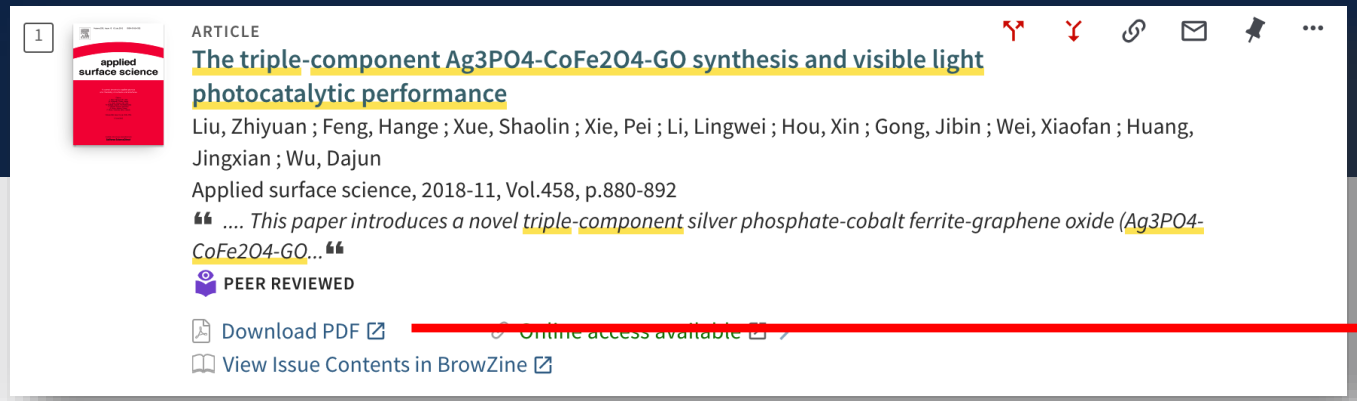
LibKey "signposts" the link in order to inform user of first order retracted status

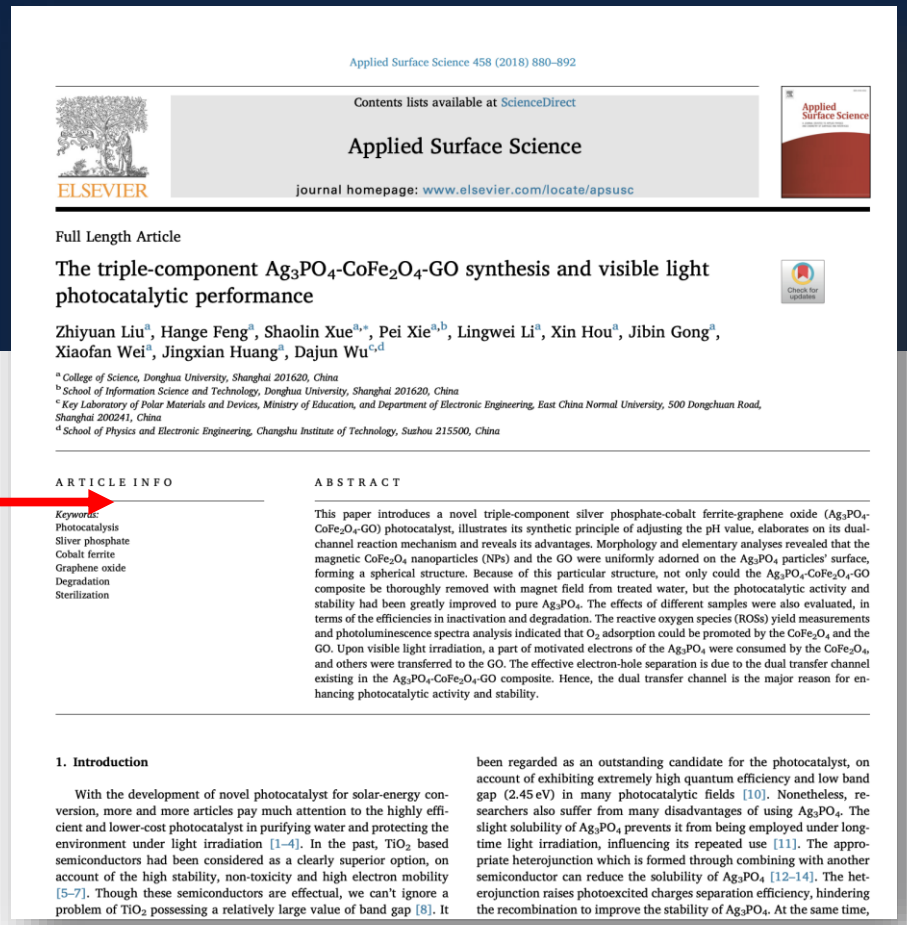
Expression of Concern Notification





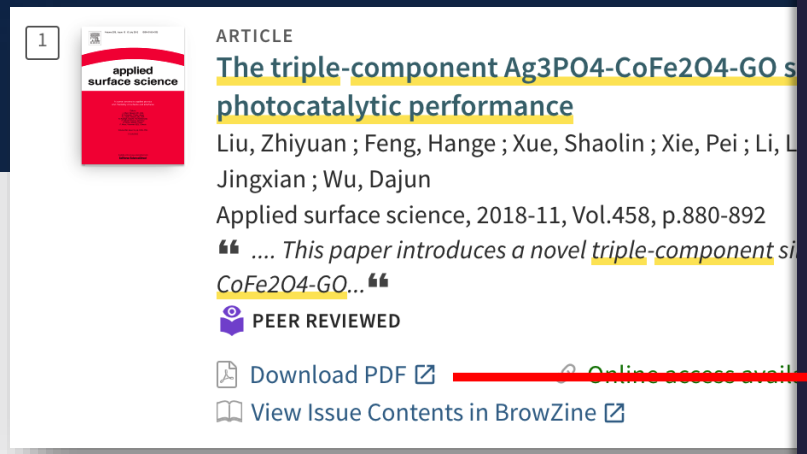
Second order retraction: current experience

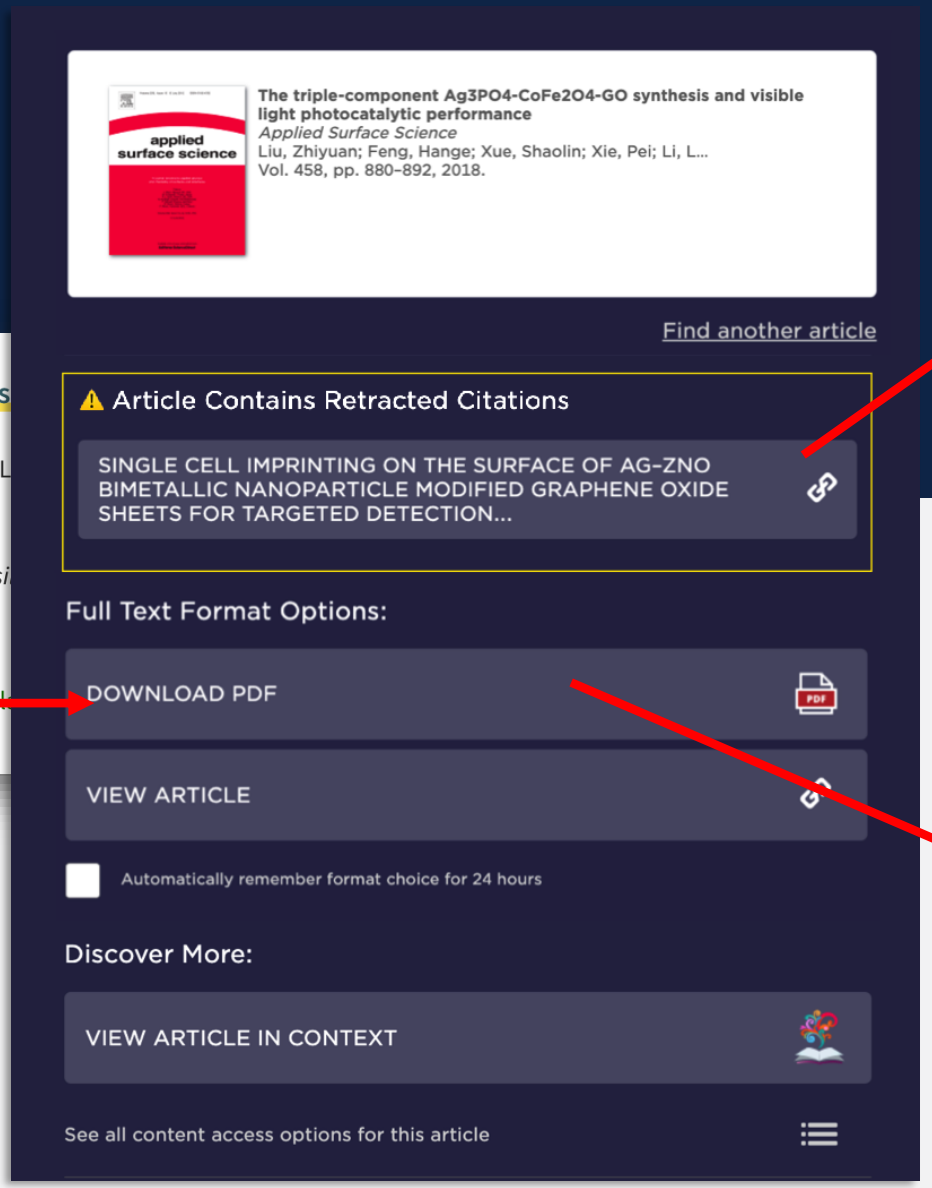


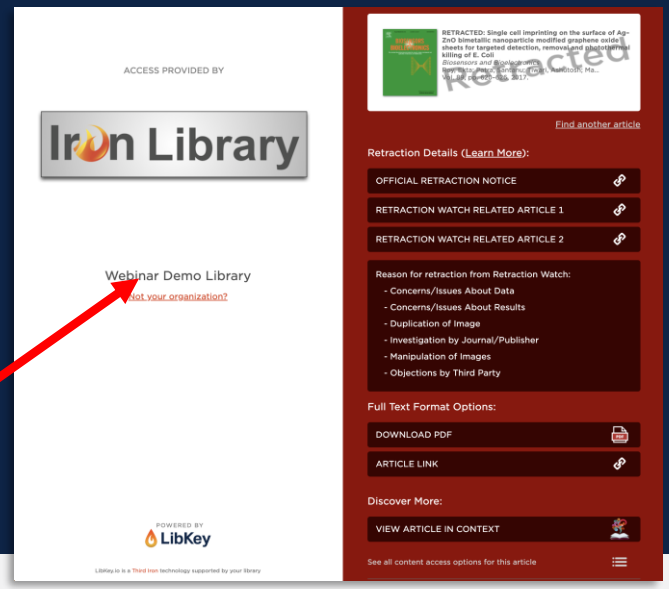


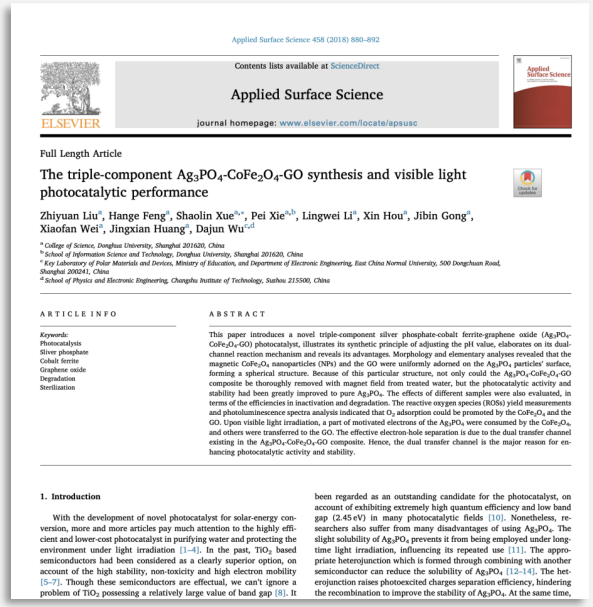
Researchers are unaware that articles they are interested in have cited retracted articles, further compounding the problem of retraction

Second order retraction









Cabells integration: library systems

1

An Uncommon Case of Atrial Fibrillation due to a Lung Mass Invasion of the Left...

by Rahman, Ali; Alqaisi, Sura; Krishnaswamy, Shiv ; More...

Cardiology research, 02/2023, Volume 14, Issue 1

Open Access

Quick Look

.... In this **case**, we present a previously asymptomatic individual who presented to the hospital with respiratory complaints and was found to have a large **lung mass**, consistent with neuroendocrine **lung**...

Problematic Journal More Info

Journal Article Full Text Online

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An Uncommon Case of Atrial Fibrillation due to a Lung Mass Invasion of the Left Atrial Cavity
Cardiology Research
Rahman, Ali; Alqaisi, Sura; Krishnaswamy, Shiv; Hospe...
Vol. 14 Issue 1, pp. 79-85, 2023.

Problematic Journal

Journal Report from Cabells (learn more):

CABELLS LINK

Violations Detail from Cabells

Publication Practices

- Little geographical diversity of authors and the journal claims to be International.

Peer Review

- Evident data that little to no peer review is being done and the journal claims to be "peer reviewed."

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Cabells integration: LibKey Nomad

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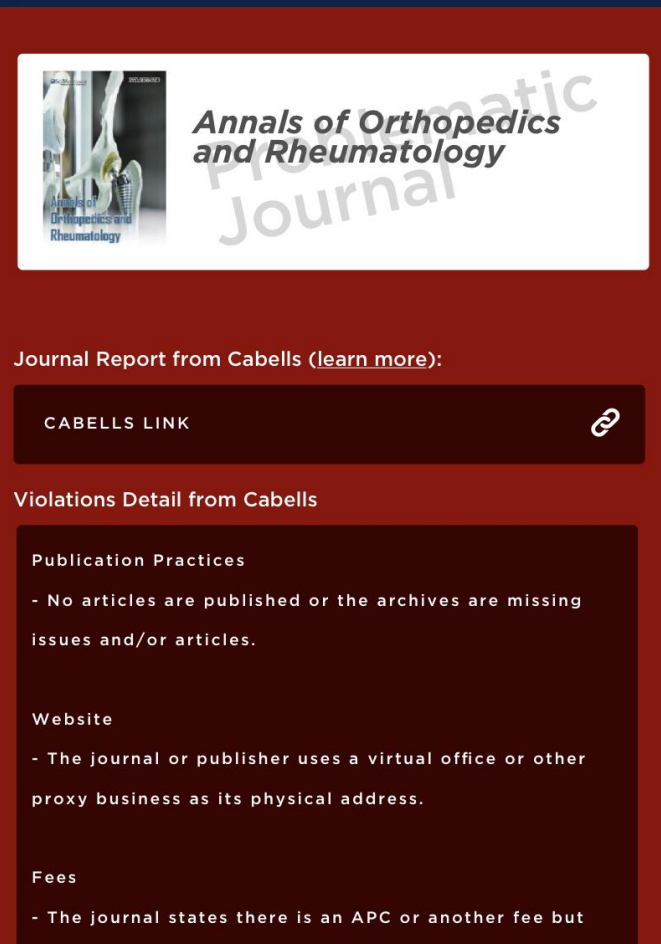
Cabells integration: LibKey Nomad

Will scan for known URL's of problematic journals as well as DOI's for Articles from those titles.



First order retraction notifications displayed

Library ID	Retractions Displyed in LibKey Nomad
1562	7,350
130	7,115
591	6,974
47	3,406
186	3,333
1390	3,294
871	2,974
239	2,572
1104	2,507
451	2,499

Library ID	Retractions Displayed in Discovery
1562	20,173
47	14,443
130	10,428
757	9,610
186	8,429
591	6,799
871	4,754
451	3,693
1704	3,466
1498	3,342

LibKey: preserving scholarly integrity

Embedding article status into the access infrastructure helps:

- Maintain Scientific Integrity
- Prevents the Spread of Misinformation
- Ensures Accurate Research
- Ethical Responsibility
- Improves Citation Metrics

Identifying papers that have cited retracted articles is critical for maintaining the quality, accuracy, and reliability of the scientific literature.

Thank you!

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