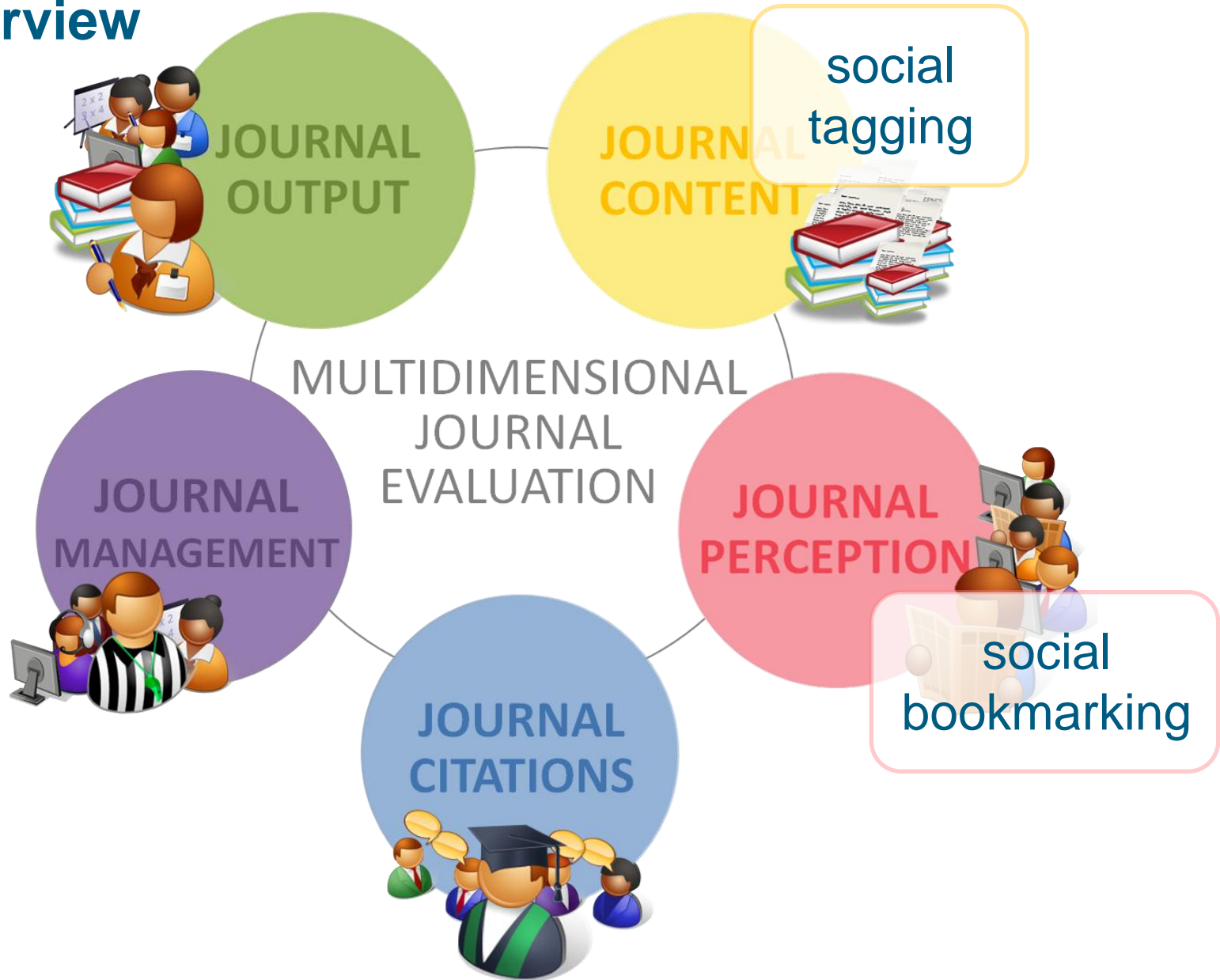


# Social Bookmarks and Tags in Journal Evaluation

March 23rd 2012 | Stefanie Haustein

# Overview

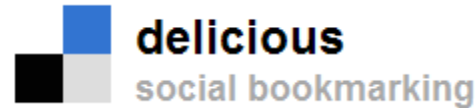


## Journal Perception and Usage

- measuring problematic despite standards
  - only available for usage at own institutions
  - publishers shut global statistics away
  - alternative needed to measure worldwide journal usage
- bookmarking articles on social bookmarking platforms indicates journal usage

## Introduction: Social Bookmarking in STM

- modeled on *delicious*
- allow academic users to store references online
- indexing resources with tags
- sharing literature with other users
- finding new content through other users



# Introduction: Social Bookmarking in STM

## michaelbusmann's library 2211 articles

Tags

 Search

Watch

Connect

Export

Sort

Hide Details

### Resonant quantum transitions in trapped antihydrogen atoms

*Nature*, Vol. advance online publication (7 March 2012), [doi:10.1038/nature10942](https://doi.org/10.1038/nature10942)

by [C. Amole](#), [M. D. Ashkezari](#), [M. Baquero-Ruiz](#), [et al.](#)

posted to [antihydrogen](#) [hyperfine](#) [microwave](#) [spectroscopy](#) [splitting](#) [trapping](#) by [michaelbusmann](#) on 2012-03-09 10:20:58

★★

 Abstract  Copy



### Light-field streaking for FELs

*Journal of Physics B: Atomic, Molecular and Optical Physics*, Vol. 44, No. 24. (28 December 2011), 243001,

[doi:10.1088/0953-4075/44/24/243001](https://doi.org/10.1088/0953-4075/44/24/243001)

by [Ulrike Frühling](#)

posted to [bunch](#) [fel](#) [free-electron-laser](#) [length](#) [measurement](#) [streaking](#) by [michaelbusmann](#) on 2012-02-18 11:18:52

★★

 Abstract  Copy



### Soft x-ray femtosecond coherent undulator radiation in a storage ring

*New Journal of Physics*, Vol. 14, No. 2. (01 February 2012), 023003, [doi:10.1088/1367-2630/14/2/023003](https://doi.org/10.1088/1367-2630/14/2/023003)

by [C. Evain](#), [A. Loulergue](#), [A. Nadji](#), [J. M. Filhol](#), [M. E. Couprie](#), [A. A. Zholents](#)

posted to [coherent](#) [femtosecond](#) [laser](#) [pulse](#) [radiation](#) [ultrashort](#) [undulator](#) [x-ray](#) by [michaelbusmann](#) on 2012-02-18

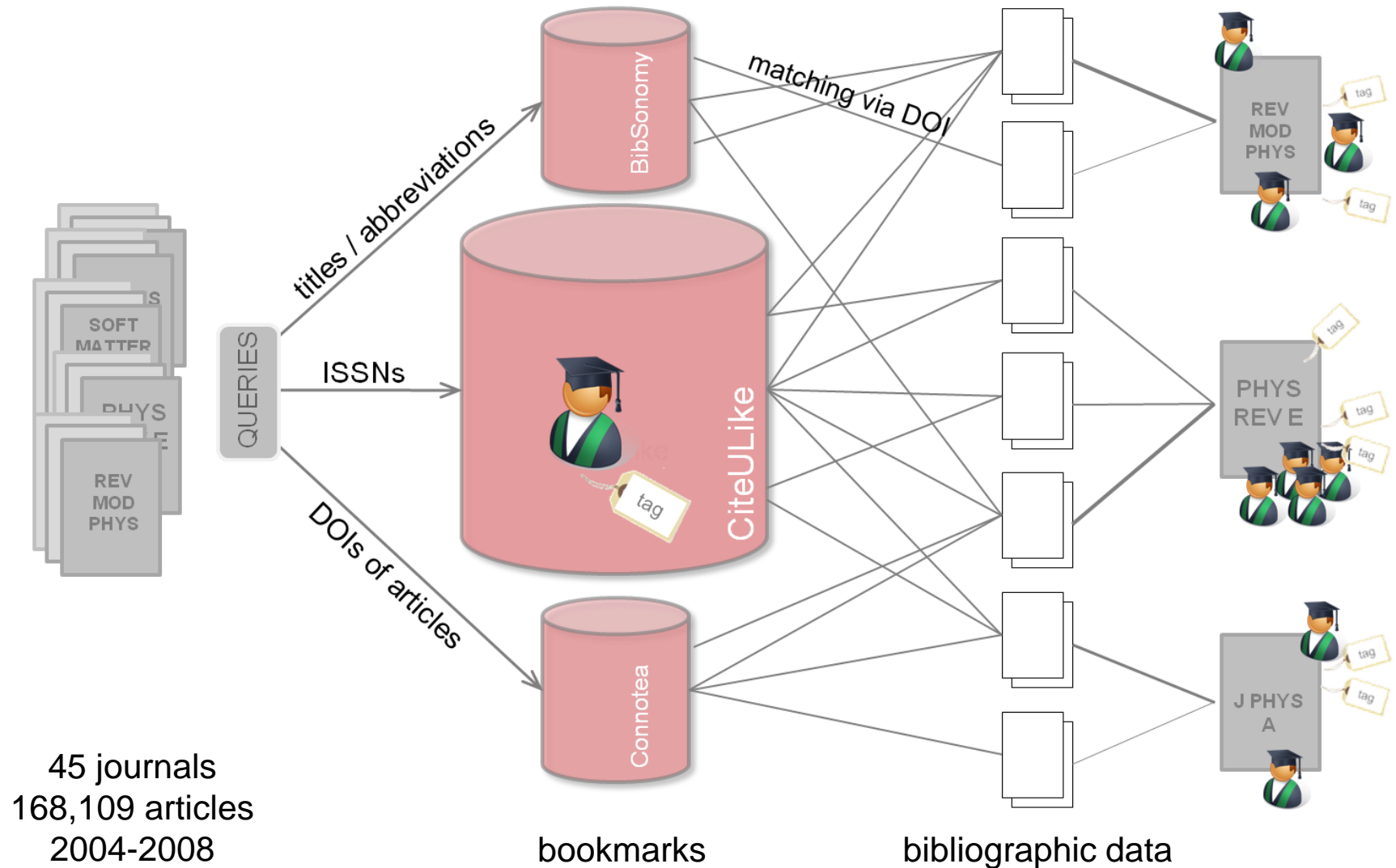
11:17:42

★★

 Abstract  Copy

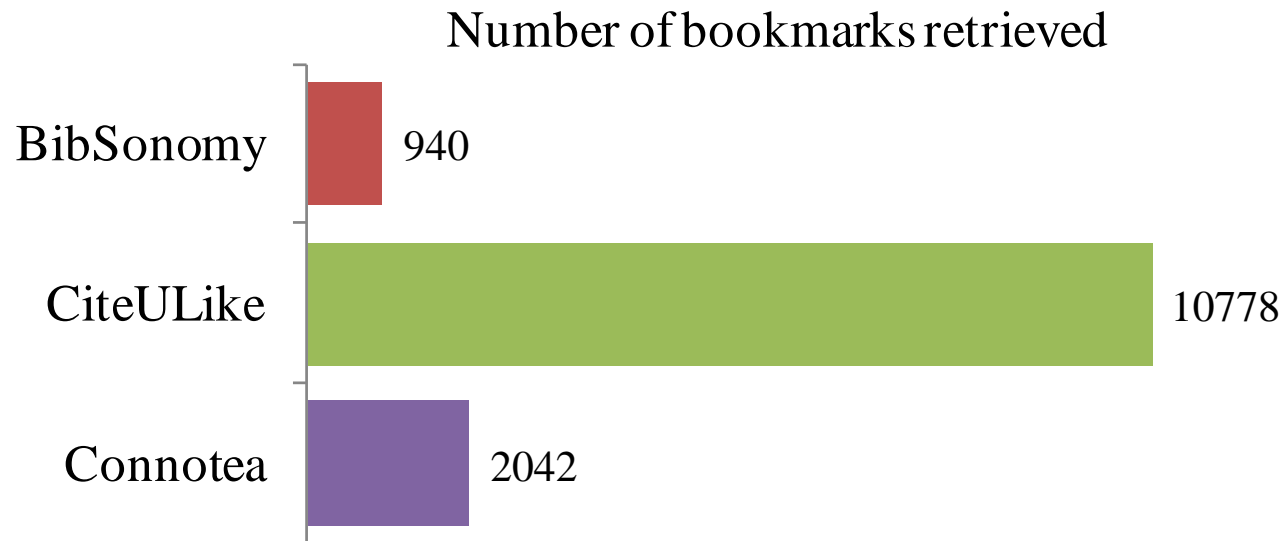


# Retrieval of Bookmarking Data



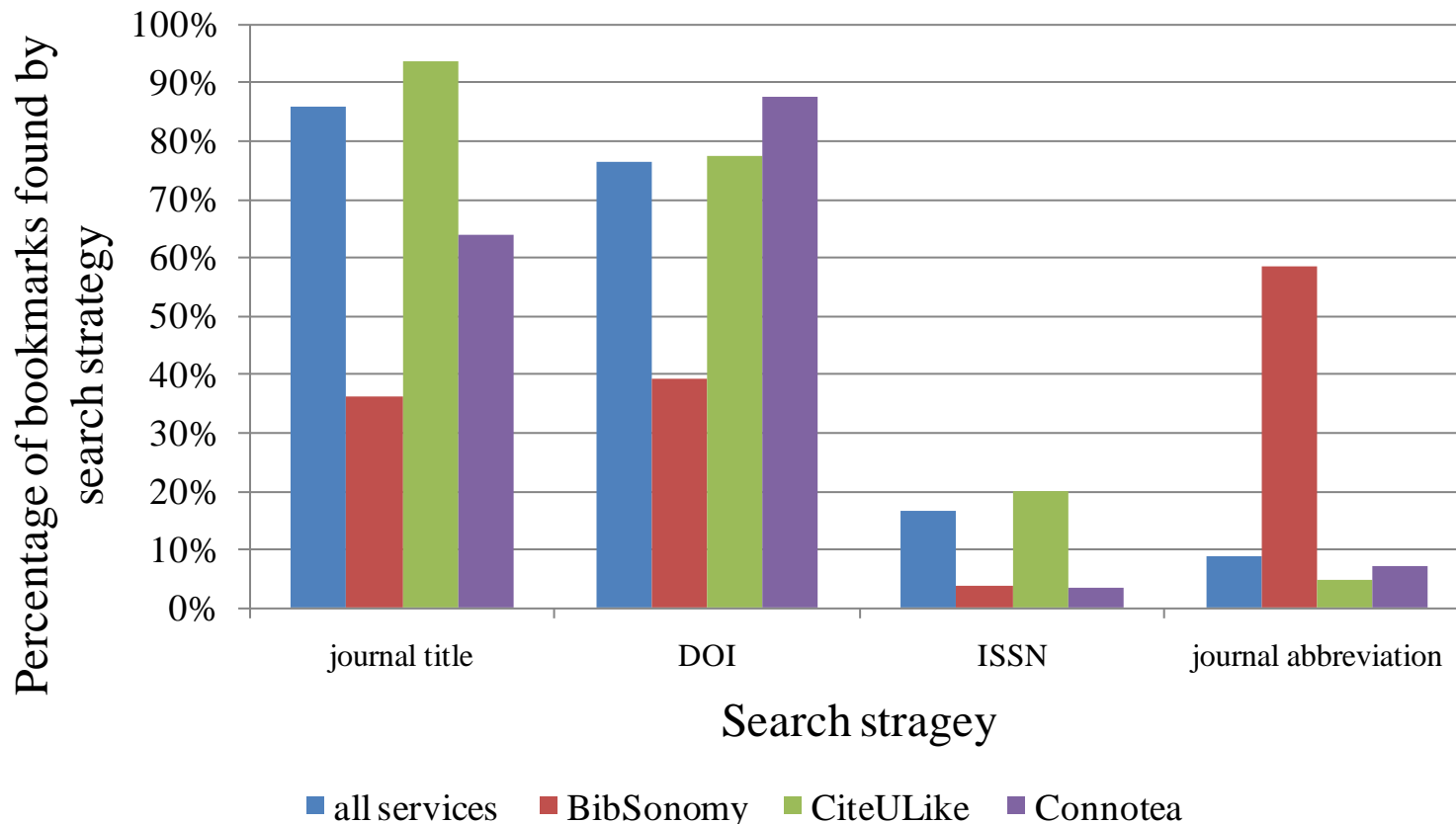
## Retrieval of Bookmarking Data

- download was checked and limited to bookmarks to documents published in 45 journals from 2004 to 2008
- 13,760 correct bookmarks retrieved



# Retrieval of Bookmarking Data

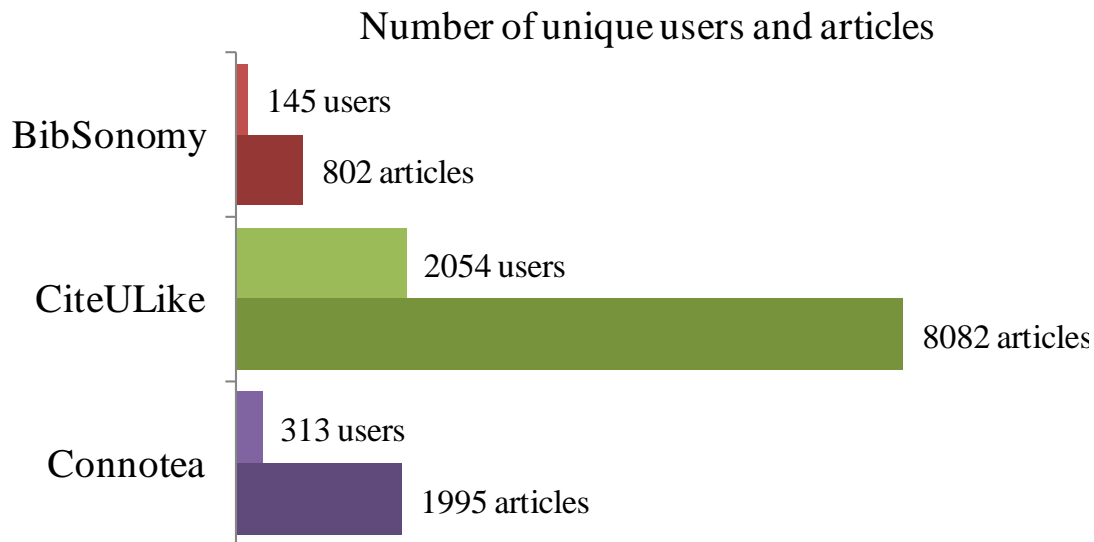
- completeness / correctness of bookmarking data





## Retrieval of Bookmarking Data

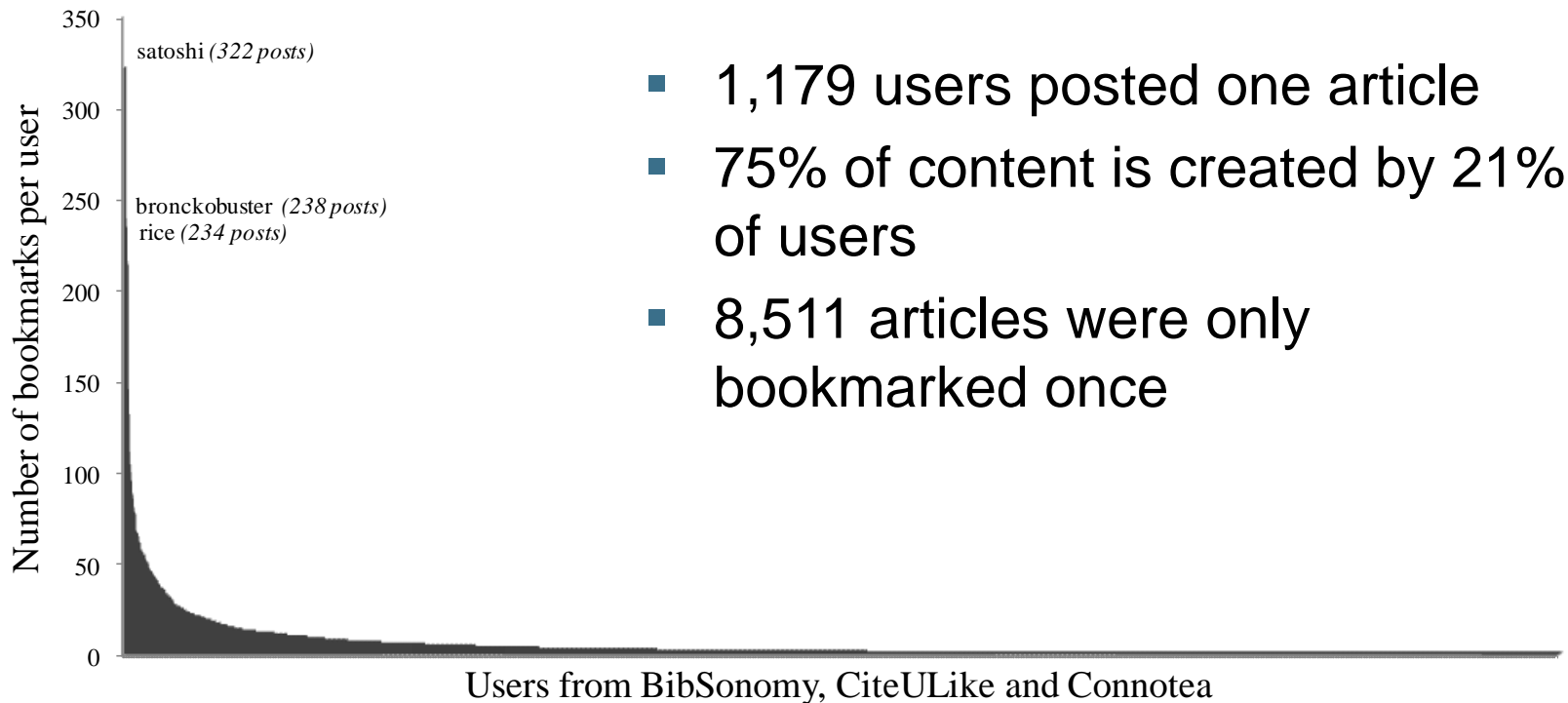
- missing DOIs were replaced by *CrossRef* and manually
- bookmarks were matched to the bibliographic entries from *Web of Science* via DOI
  - 98.9% of bookmarks matched



- 2.8% doubles in user names between services
- results were combined

## Retrieval of Bookmarking Data

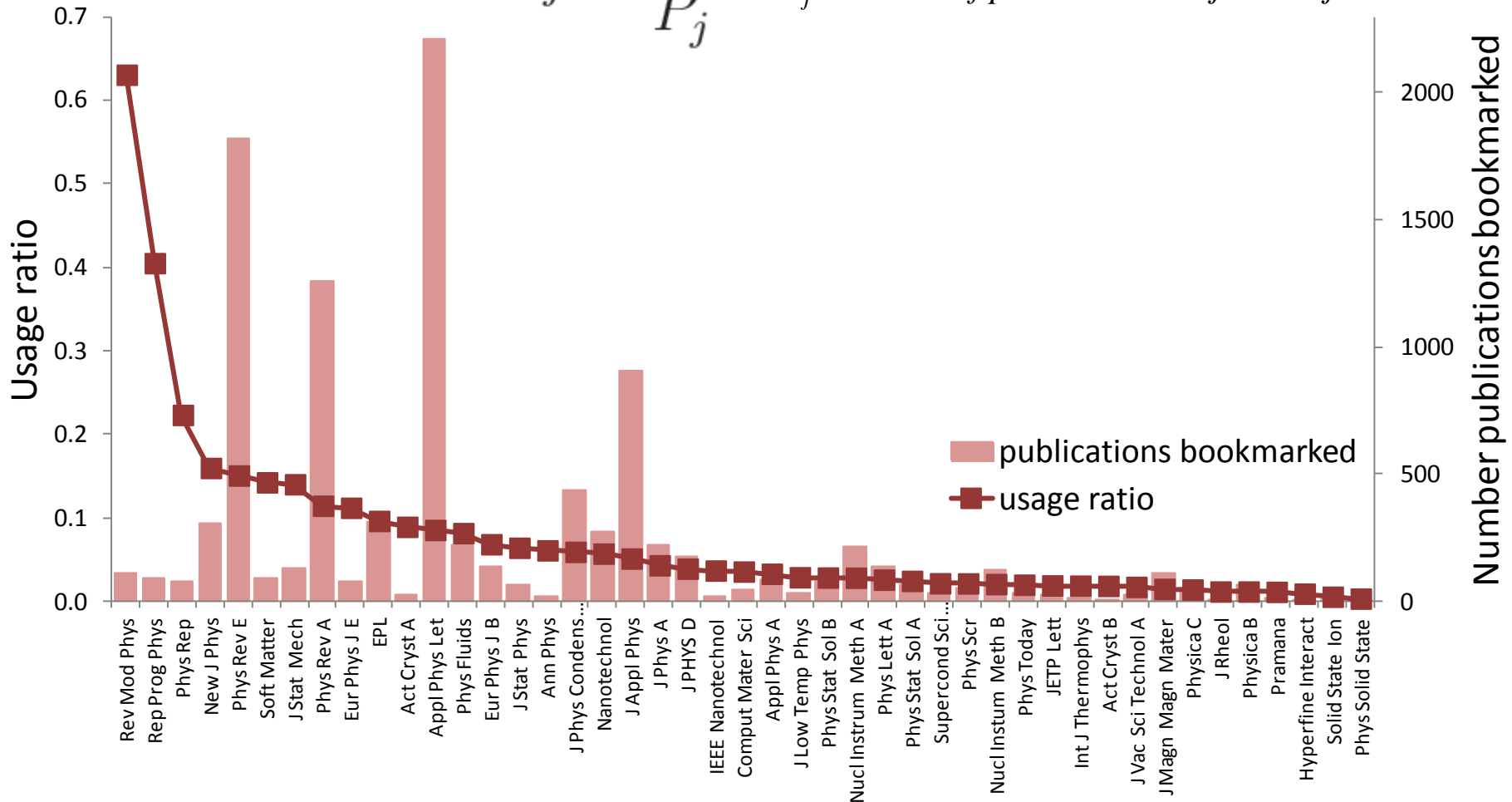
- 13,608 bookmarks were matched to 10,280 articles
- 2,441 unique users



# Usage Ratio

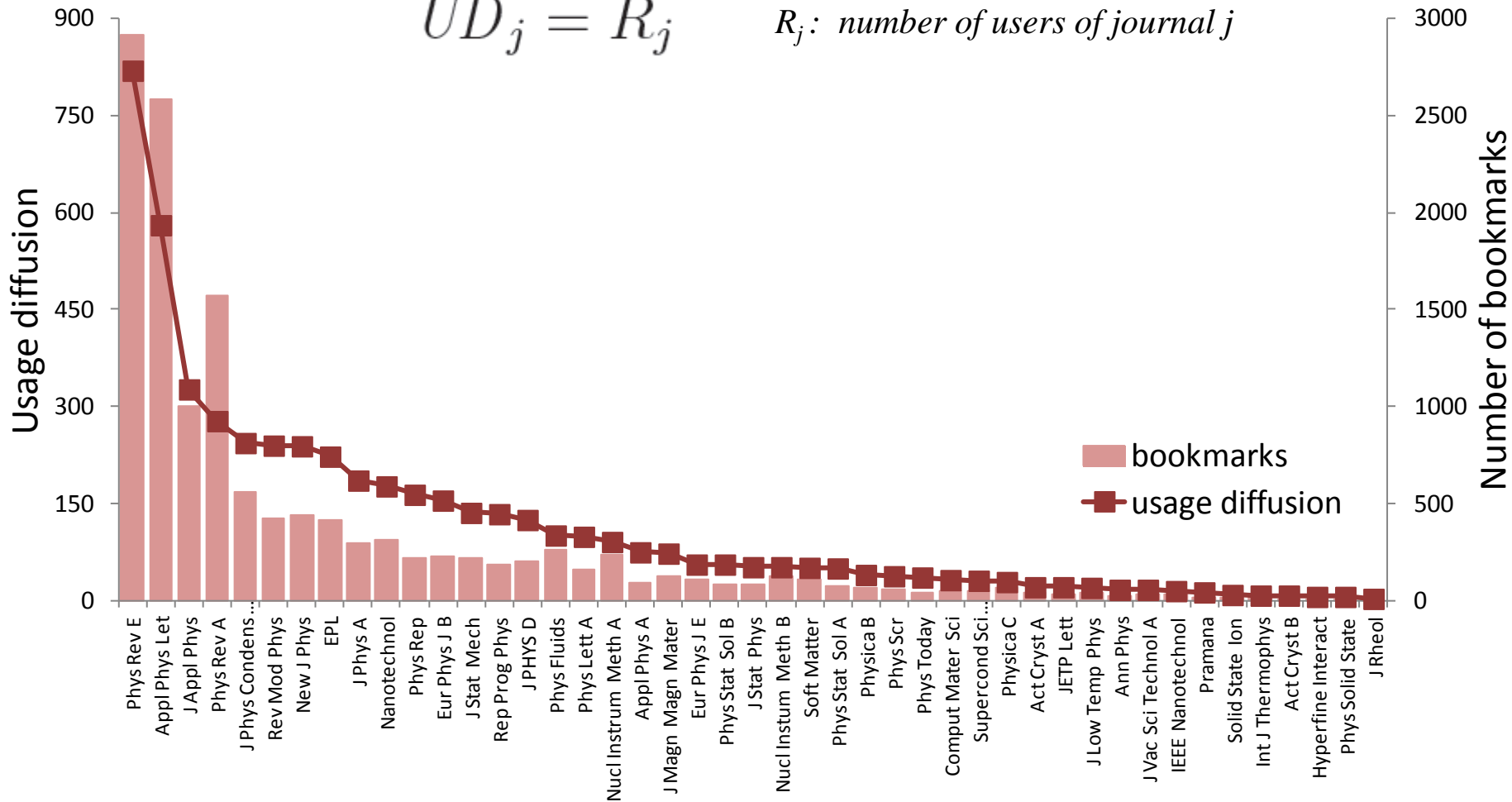
$$UR_j = \frac{P_b}{P_j}$$

$P_b$ : number of publications bookmarked  
 $P_j$ : number of publications in journal  $j$

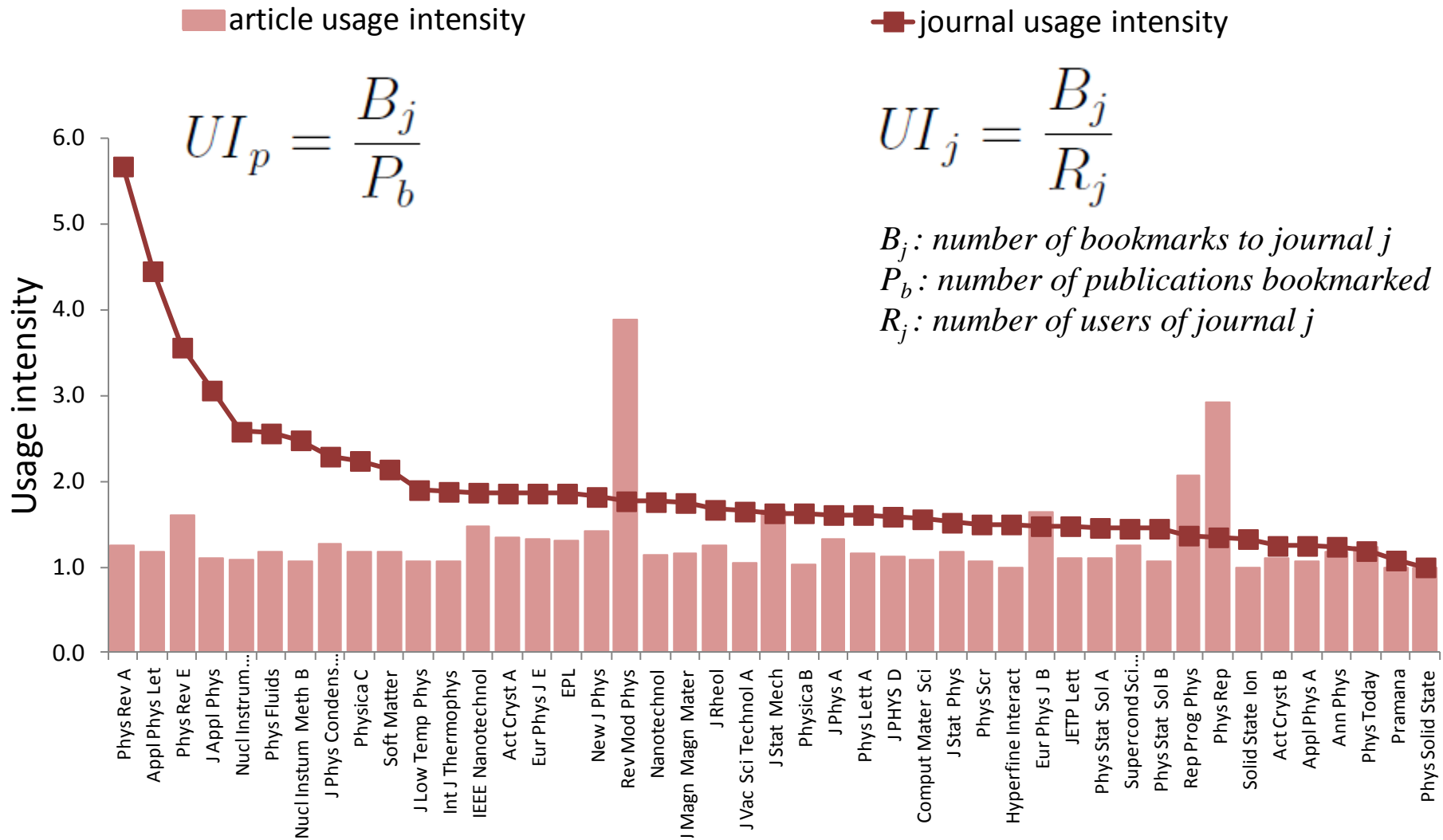


# Usage Diffusion

$$UD_j = R_j \quad R_j: \text{ number of users of journal } j$$



# Article and Journal Usage Intensity



# Social tagging

## Actors in subject indexing

- authors
- professional indexers
- readers

classification  
systems

thesauri

subject  
headings



full text

title

abstract

author keywords



social  
tagging

# Social tagging

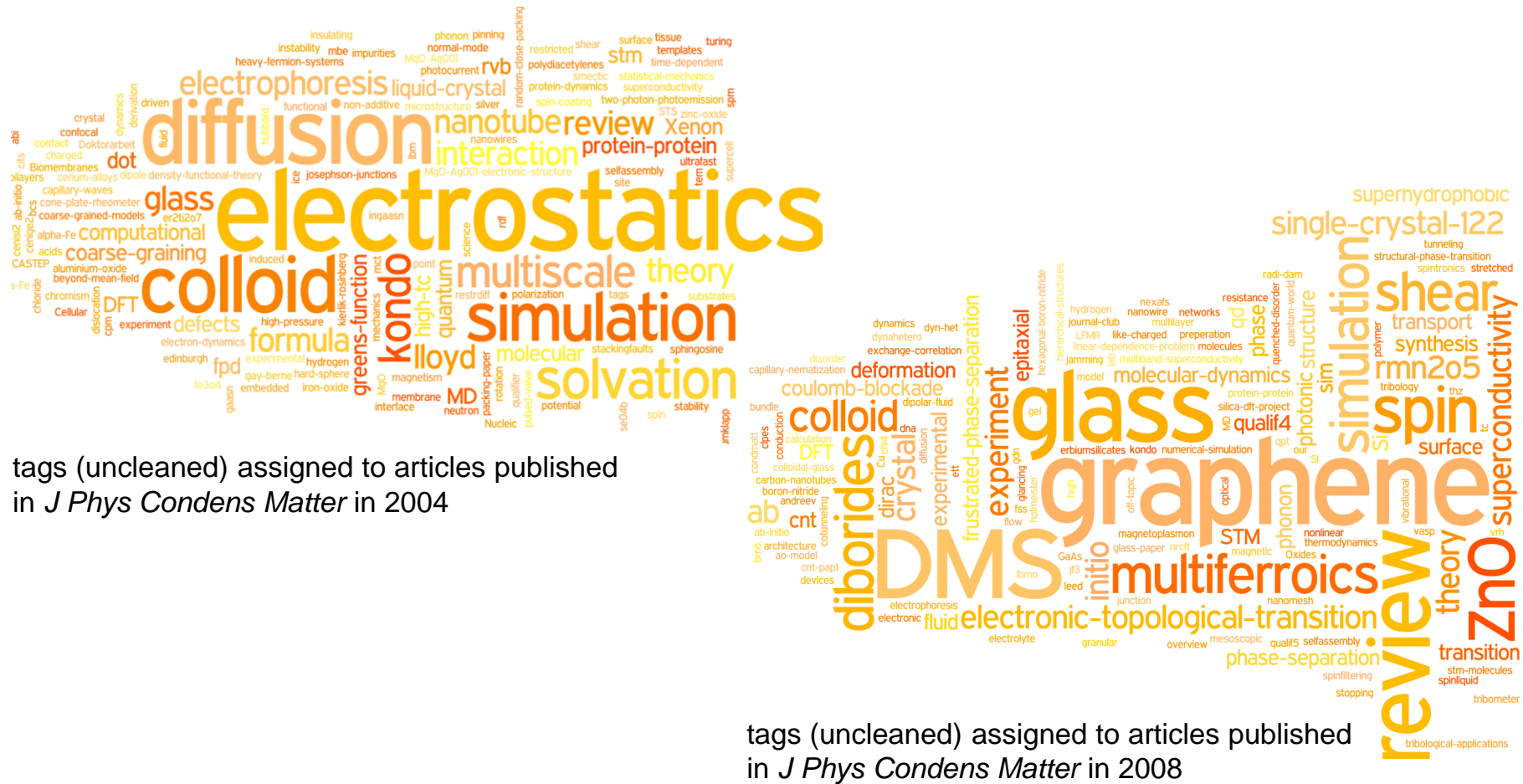
## Comparison with conventional index terms

- automatic term unification
  - removal of special characters
  - unifying BE and AE suffixes
  - stemming (*Porter 2*)
- lexical term comparison on document level

Mean of 724 article-based similarity values	Mean overlap-tag ratio	Mean overlap-analyzed term ratio	Mean cosine similarity
Title terms	0.365	0.245	0.279
Abstract terms	0.503	0.048	0.143
Author keywords	0.118	0.104	0.103
WoS KeyWords Plus	0.029	0.030	0.026
Inspec headings	0.133	0.034	0.062

# Social tagging

A reader-specific perspective on journal content



tags (uncleaned) assigned to articles published in *J Phys Condens Matter* in 2004

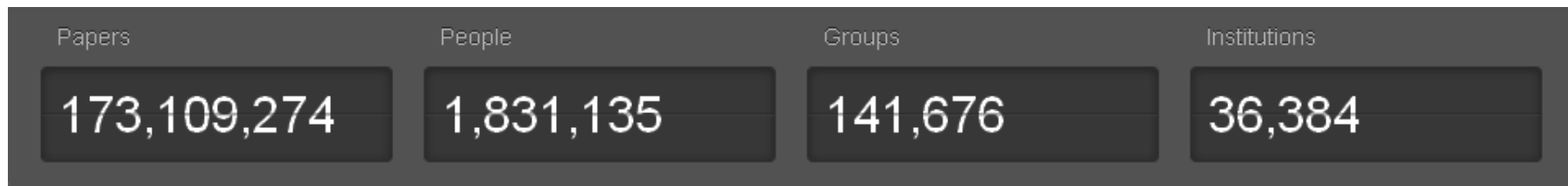
tags (uncleaned) assigned to articles published in *J Phys Condens Matter* in 2008



## Conclusions

- data from social bookmarking services can be used in journal evaluation
- number of bookmarks can be used alternatively to measure worldwide usage of journals
- tags reveal the users' perspective on journal content
  
- poor quality of bookmarking data makes retrieval and analysis complex
- social bookmarking in STM is still in its infancy and services are competing for a critical mass

## Outlook: Mendeley



You're searching the world's largest crowd-sourced research catalog with over 34 million papers.

Reader **Meter**  
ALPHA

total **Impact**