

Slide 1

### Abstract

Since I have been publishing my research papers mainly in open access journals, most of my self-archived articles, including English translations, are originally published in domestic journals. Although such publications are not evaluated for my academic accomplishments, I continue this activity because I want to share the following two things beyond my own special field. (1) Serendipitous episodes that are not allowed to publish in academic journals and (2) know-how that is useful for research activities. In this talk, my motivation, unexpected response to my documents and my future plans are told.

Presented in the 1st SPARC Japan seminar 2009 in Japanese.  
on 25th June, at National Institute of Informatics, Tokyo.  
<http://www.nii.ac.jp/sparc/event/2009/20090625.html>  
(Video is available at this page)

Self-introduction

S. Todoroki

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- Research on optical fibers (NTT→NIMS)  
⇒ Publish them in OA Journals
- Write readings for researchers (in Jap. & Eng.)  
⇒ Self-archive them at Scribd
- T<sub>E</sub>Xnician, Rubyst, Debian GNU/Linux user
- First tester of NIMS Digital Library eSciDoc

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OVERVIEW

My joy of self-archiving

Motivation

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Benefit

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Proposals

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Slide 3

**Motivation** 

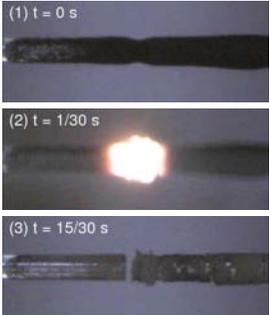
- My **Serendipitous** Experiences

⇒ **Serendipity** is the effect by which one accidentally discovers something fortunate, especially while looking for something else entirely unrelated. ...  
— Wikipedia

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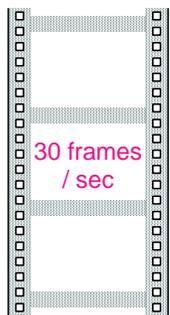
**Trial to Principal** Early summer in '04

- A sales person saw my poster & offered the use of his brand-new camera.



(1)  $t = 0 \text{ s}$   
(2)  $t = 1/30 \text{ s}$   
(3)  $t = 15/30 \text{ s}$

↑ Optical fuse breakdown



30 frames / sec

How about 250,000 fs / sec?

Let me see...

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**Motivation** 

**Trial to Principal**

*A salesperson gave me a ticket to a conference*

**Zen-driven evidence**

*Heaven helps my experiment to pass a peer review*

**How to call chances**

*What lessons these episodes gave us?*

Slide 5

**Trial to Principal** Fiber fuse is more interesting!

- Continuous **self-breakdown** of optical fibers Video 1



~1m/s 7W Laser

Video by Mr. T. Akutsu (Furukawa)

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**Background** **Fiber fuse**

- Found in 1987
- Initiated by **heat** @ fiber propagating a-few-W light
- Bullet-like **periodic void formation**

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**Trial to Principal**

8/4 11 16 9/5

Demo Deadline Conference

- “Give me one more chance!  
I’ll submit a **post-de adline paper**  
if succeeded.”

⇒ “OK! The next week is our holidays.”

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**Trial to Principal** **Demonstration: 4th Aug '04**

1480nm (2) Pass (1) Heat

Laser 9W

Camera

- Captured 3 times, but
- Over-exposed images due to too strong emission

→ I don’t want to give up!

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**Trial to Principal** **The result**

- Accepted! Big surprise.
- Prof. Dianov: “What’s the new finding?” `dianov.eps`
- Outside the room:  
“Your paper didn’t gain high points  
but I insisted it be adopted in the committee”
- They published similar result 20 days later

I. Bufetov & E. Dianov,  
*Physics-Uspekhi*, 48 [1] 91 (2005)

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**Motivation** 

**Trial to Principal**  
*Welcome the coming & speed up if it seems excellent.*

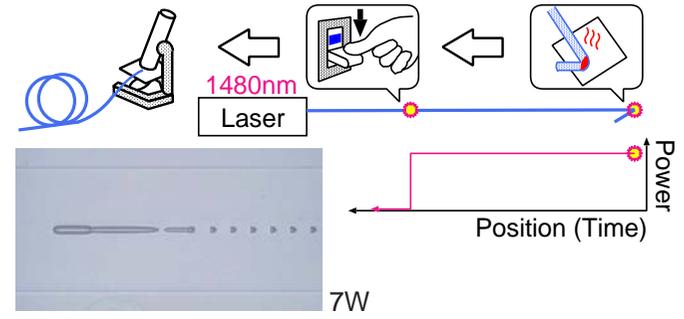
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**Zen-driven evidence**  
*Heaven helps my experiment to pass a peer review*

**How to call chances**  
*What lessons these episodes gave us?*

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**Zen-driven evidence** **Accidental discovery**



1480nm Laser

7W

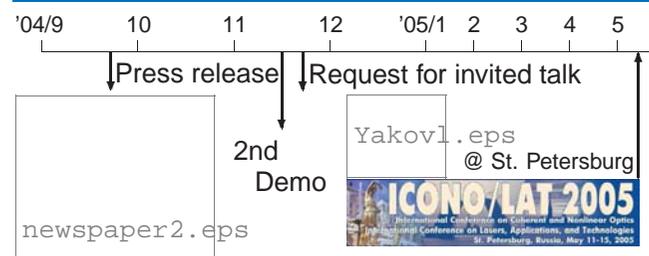
Power

Position (Time)

Video 2 ⇒ submitted 1 month before the talk  
<http://www.youtube.com/tokyo1406>

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**Zen-driven evidence** **After that**



'04/9 10 11 12 '05/1 2 3 4 5

Press release

2nd Demo

Request for invited talk

Yakovl .eps  
 @ St. Petersburg

newspaper2.eps

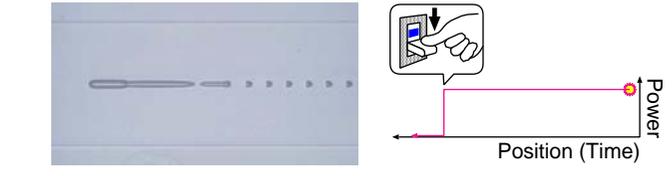
ICONO/LAT 2005  
 International Conference on Coherent and Nonlinear Optics  
 International Conference on Lasers, Applications, and Technologies  
 St. Petersburg, Russia, May 11-12, 2005

- Great camera!  
 but how about me?
- Why bullet-like voids?

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**Zen-driven evidence** **A severe peer review**

- “Show the decay time of pump laser.”



Power

Position (Time)

5/6 11 15 6/5

Conference Deadline

- “That camera will give me the solution!”

⇒ Sent an E-mail request

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**Zen-driven evidence** Allowed 2-hour experiment

5/6 11 15 26 6/5  
Conference Demo Deadline

Just like "Shinken shiraha-dori"

Required Precision  $\frac{1}{100}$  sec

Laser

OFF

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**Motivation** 

**Trial to Principal**  
*Welcome the coming & speed up if it seems excellent.*

**Zen-driven evidence**  
*Just do what you should do on right time fearlessly.*

---

**How to call chances**

*What lessons these episodes gave us?*

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**Zen-driven evidence** On the day

- Mind like water — free of anxiety
- After 6 trials & errors, ...

Laser

OFF

Intensity (a.u.)

Position (a.u.)

t = -1000 μsec

t = -500 μsec

t = -6.7 μsec

t = 0.0 μsec

t = 6.7 μsec

t = 13.3 μsec

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**How to call chances** Chance cause diagram

showing contribution of

Heaven

Myself

Someone else

performing experiments

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**How to call chances** Someone else helps you if  
 your papers & presentations are always prepared for

- My poster ⇒ Salesperson's proposal
- PD submission ⇒ Professor's vote

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**Motivation** 

**Trial to Principal**  
*Welcome the coming & speed up if it seems excellent.*

**Zen-driven evidence**  
*Just do what you should do on right time fearlessly.*

**How to call chances**  
*Do by yourself, impress others, then heaven helps you.*

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**How to call chances** Once you practice these,

**Chance favors the Prepared Mind.**  
 (Louis Pasteur, 1822–95)

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**OVERVIEW**

My joy of self-archiving

**Motivation** 

*Want to share living lessons beyond specialties.*

---

**Benefit** 

**Proposals** 

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**Benefit** 

**YouTube Power**

*Can it help us to distribute academic information?*

**Beyond the barrier**

*Is it worth translating peer-reviewed papers?*

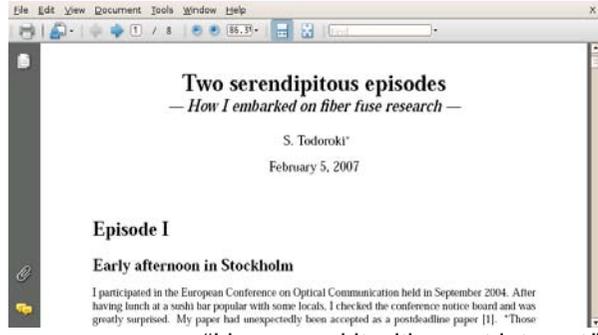
**Enhancing readership**

*Should we spend our precious time for it?*

Slide 24

**YouTube Power** A death notice cued me in

'05/5/15 Invited talk @Russia → '06/4/1 Part 1 in print → '07/1/22 English translation on line → '07/2/5 English translation on line → '07/3/15 Part 2 in print

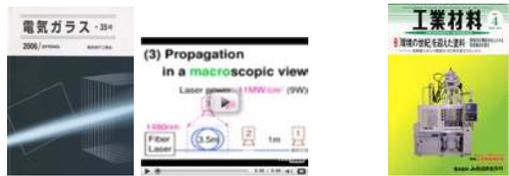


“I have read it with great interest.” 

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**YouTube Power** After the invited talk

'05/5/15 Invited talk @Russia → '06/4/1 Part 1 in print → '06/11/29 YouTube upload → '07/3/15 Part 2 in print



- Wrote 2 articles for domestic journals
- YouTube submission ⇒ called a mail from US  
25,000 views / 2.5 years @ 10 movies

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**YouTube Power** Heavy access to my YouTube

'05/5/15 Invited talk @Russia → '06/4/1 Part 1 in print → '06/11/29 YouTube upload → '07/2/5 English translation → '07/3/15 Part 2 in print → '08/4/3 ?



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**YouTube Power** on a Spanish science blog

'05/5/15 Invited talk @Russia → '06/4/1 Part 1 in print → '07/2/5 English translation → '07/3/15 Part 2 in print → '08/5/15 \* ? \*

? = a Social News Cite

“es muy curioso de leer.” ←

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**Benefit**

**YouTube Power**  
Interesting short movies attract general readership

**Beyond the barrier**  
Is it worth translating peer-reviewed papers?

**Enhancing readership**  
Should we spend our precious time for it?

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**FYI** My movie is cited in

- S. I. Yakovlenko, *Laser Physics*, **16** (2006) 1273 [Theoretical Phys.]
- S. Ohmori (NICT), Talk in 2008 Taipei Summit [Opt. Commun.]

↑ S. Todoroki, *Optics Express*, **13** (2005) 6381

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**Beyond the barrier** Self-archived paper was cited

added on '07/10/21

**E-research notebook** [編集]

最近では、電子式の実験ノートを使う研究者も増えてきている。検索性については電子式が圧倒的に勝るものの、証拠能力やとっさの記録への対応等の点において疑問視する声も根強くある。[14] このように、実験ノートの電子化については、現状根強い批判がある。一方で計測機器の電子化に伴い、従来の「紙ベースの記録」

15. ^ 轟直市、小西智也、井上悟：「`ブログを基にした実験ノート：個人の研究活動を効率化する情報環境, *Appl. Surface Sci.*, 252, 7, pp. 2640-2645 (2006). [http://www.geocities.jp/tokyo\\_1406/node5.html#Todoroki05ASSJ@J](http://www.geocities.jp/tokyo_1406/node5.html#Todoroki05ASSJ@J)

電子式の実験ノートの最大の利点は、その検索性にある。例えば、物質・材料研究機構の轟直市らは、計測機器の電子化に伴い、従来の紙ベースの実験ノートを使い続ければ「必然的に、『計測機器が出力したデータ』と、『紙ベースの記録』とにデータが散逸することになり、情報の整理や、実験結果の解析、及び、記録に基づいた実験へのフィードバックなどに支障が出ることを指摘している[15]。

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**Beyond the barrier** A way of research acceleration

'04/12/10 presented at an Int'l WS → → →

↑

since '00/12 Blog-based research notebook

Awareness of Blog in '04 ⇒



Merriam-Webster's Words of the Year 2004

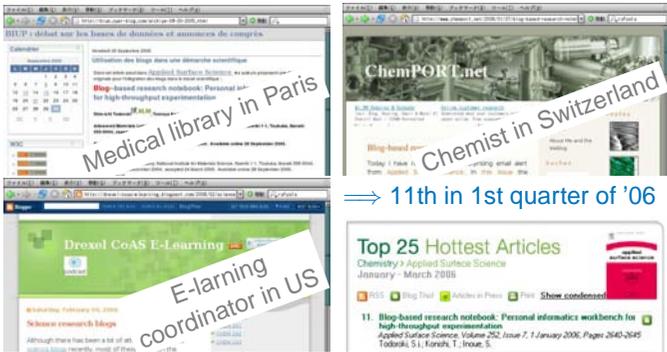
Based on your online lookups, the #1 Word of the Year for 2004 was

**Blog** noun [short for Weblog] (1999) : a Web site that contains an online personal journal with reflections, comments, and often hyperlinks provided by the writer

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**Beyond the barrier** Response from bloggers

'04/12/10 presented at an Int'l WS → '05/9/28 on line <sup>9/30</sup> ★ → '06/1/24 in print <sup>1/27 2/4</sup> ★★



Medical library in Paris

Chemist in Switzerland

E-learning coordinator in US

⇒ 11th in 1st quarter of '06

Top 25 Hottest Articles  
Chemistry > Applied Surface Science  
January - March 2006

11 Blog-based research notebook: Personal informatics workbench for high-throughput experimentation. *Applied Surface Science*, Volume 252, Issue 7, 1 January 2006, Pages 2640-2645. Todoroki, S.; Konishi, T.; Inoue, S.

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**Beyond the barrier** Original peer-reviewed paper

'04/12/10 presented at an Int'l WS → '05/9/28 on line → '06/1/24 in print →



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SCIENCE @ DIRECT®

Applied Surface Science 252 (2006) 2640-2645



[www.elsevier.com/locate/apusoc](http://www.elsevier.com/locate/apusoc)

**Appl. Surf. Sci. 252 (2006) 2640-2645**

**Blog-based research notebook: Personal informatics workbench for high-throughput experimentation**

Shin-ichi Todoroki<sup>a</sup>, Tomoya Konishi, Satoru Inoue

*Advanced Materials Laboratory, National Institute for Materials Science, Namiki 1-1, Tsukuba, Ibaraki 305-0844, Japan*

Received 8 December 2004; accepted 24 March 2005  
Available online 28 September 2005

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**Beyond the barrier** Translation attracts more

'04/12/10 presented at an Int'l WS → '05/9/28 on line → '05/10/5 Japanese translation on line <sup>10/20</sup> ☆ → '06/4/20 ☆ → '07/1/21 ☆ →



Graduate in biochemistry

Graduate in chemistry

Researcher in organic chem.

⇒ appeared on '07/10/21

実験ノート  
ウィキペディア  
フリー百科事典『ウィキペディア (Wikipedia)』

⇒ '08/5/25 a linguist's blog

Slide 35

**Beyond the barrier** **Still attracting readers**

'05/9 on line  

	Author's	'09/4	36	46	appeared in '07/10
	Postprint	5	32	60	
		6	18	45	
Translation	'09/4	109	5		
(on 6/25)	5	89	1		
	6	64	2		
			Views	Downloads	

Citation of original: 2 (ISI WoK)  
(w/o self-citation) 6 (Google Scholar)

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**Benefit** 

**YouTube Power**  
*Interesting short movies attract general readership*

**Beyond the barrier**  
*Blog & Wikipedia help to grow young readership*

---

**Enhancing readership**  
*Should we spend our precious time for it?*

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**Proposal** **to Journal Publishers**

- Allow to attach supporting information to E-journals  
⇒ Translation / Abstract **in Japanese**

Cf. S. Todoroki: *PLoS ONE*, 3 [9] e3276 (2008).

5/30	7/3	9/4
Submit to a Letter	→ Rejected ↓	
Translate	→ Submit to PLoS ONE	Accepted

Translation helps to find errors in original!

Slide 37

**Enhancing readership** **Domestic contributions**

- Requested so often, but not evaluated.
- Write attractive docs,  
publish & self-archive them at the same time
- PR on the net & monitor their access counts

Slide 39

**Enhancing readership** Case 1: A domestic bulletin

'07/7/1 in print (5880 copies) → → → →

'07/7/2 Announce on Wiki +700 views

'08/6/22 Post on a news site +200 views



"Manuscript writing support system for researchers based on hypertext list of their achievements" (Ref. 5)

- including links to related files in PC
- synchronizing researcher's homepage
- compiled through BIB<sub>T</sub>E<sub>X</sub> & Ruby

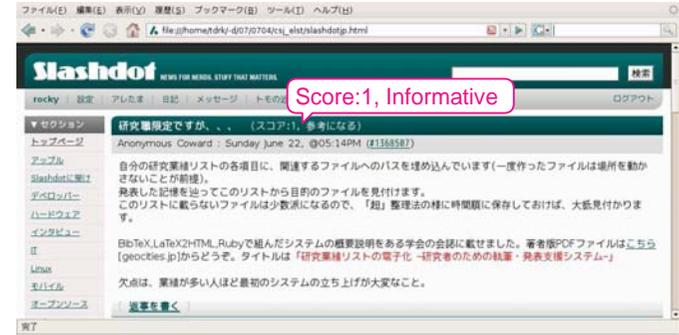
Slide 40

**Enhancing readership** Q: "How to organize e-files"

'07/7/1 in print (5880 copies) → → → →

'07/7/2 Announce on Wiki +700 views

'08/6/22 Post on a news site +200 views



Score:1, Informative

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**Enhancing readership** Notice to T<sub>E</sub>Xnicians

'07/7/1 in print (5880 copies) → → → →

'07/7/2 Announce on Wiki +700 views



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**Enhancing readership** C2: A technical magazine

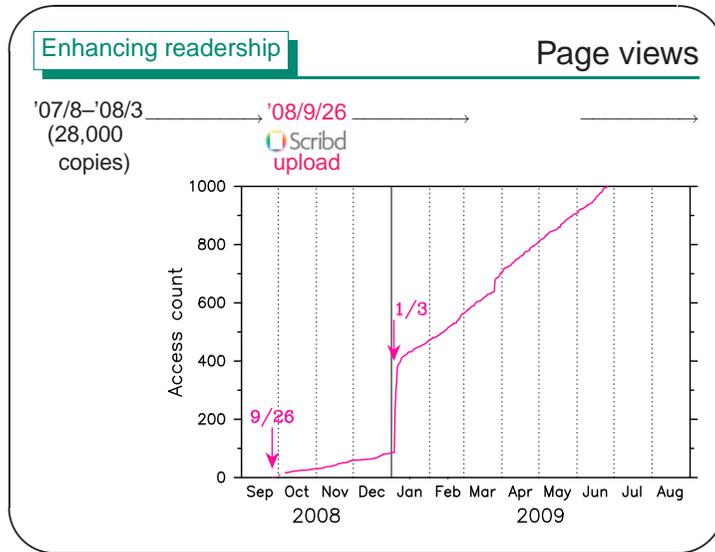
'07/8-'08/3 (28,000 copies) → → → →



"Presentation techniques for enhancing your serendipity" (6 issues) ← see Slide 20

- Know-how of preparing slides showing examples
- Self-archive simultaneously (embargo: 15 days)

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**Benefit**

**YouTube Power**  
*Interesting short movies attract general readership*

**Beyond the barrier**  
*Blog & Wikipedia help to grow young readership*

**Enhancing readership**  
*Simultaneous self-archiving & PR save time & labor*

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**Enhancing readership** **Q: "Presentation Howto?"**

'07/8-'08/3 (28,000 copies) → '08/9/26 Scribd upload → '09/1/3 Post on a news site → +300 views

Score:3, Informative

A comment found on the net:  
"★★★★★ Concise summary of basics"

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**OVERVIEW**

My joy of self-archiving

**Motivation**   
*Want to share living lessons beyond specialties.*

**Benefit**   
*Once remove barriers, get many responses*

---

**Proposals**

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**Proposals** 

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**Next trial**

**Call for action**

**Hope for IR<sup>†</sup>**

<sup>†</sup>Institutional Repository

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**Proposals** 

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**Next trial**  
*Dissemination experiment: Paper ⇒ Self-archived doc.*

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**Call for action**

**Hope for IR**

Slide 50

**Next trial** My soon-to-be-released contribution

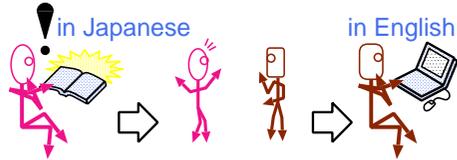
“Make the best use of your **serendipity** by inspiring your audience”

7/1 7/10 8 9 10

in print  22,000 copies in Japanese

Translated PDF  
on line  

Call for recommendation to non-Japanese readers



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**Call for action** Conclusion of this article

“Self-archiving also brings about unexpected chances”

- Enhances awareness of IR among the members of the Japan Society of Applied Physics

⇒ Useful for educating scholars of other fields?

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**Call for action** **Embargo: 3 months!**

7/1 7/10 8 9 10 10/10 11

in print in Japanese Postprint on line

Translated PDF on line

NIMS Digital Library eSciDoc Scribd

in Japanese

Reprint request:  
TODOROKI.Shin-ichi@nims.go.jp

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**Hope for IR** **Be the killer application for scholars**

- Cradle to Archive
- Automatic sync BTW the archive & the local files

Lab. Office Internet Mobile Home

LAN

Manuscript writing support anywhere, anytime

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**Proposals**

**Next trial**  
*Dissemination experiment: Paper ⇒ Self-archived doc.*

**Call for action**  
*This article is open for education about self-archiving.*

---

**Hope for IR**

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**Hope for IR** **Cradle to Archive**

Securing manuscripts before publication

Past Future

- Paper Submission
- Request for contribution

NAVIGATOR

Presentation Publication

Deadline Deadline Deadline

Schedule

Paper List

Output service

Cradle IR Archive

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**Hope for IR** Auto-sync BTW archive & local files

- Manage the paths of files in PC

- Retrieve old files through IR
- Version management, Collaborative writing support

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**Proposals**

**Next trial**  
Dissemination experiment: Paper ⇒ Self-archived doc.

**Call for action**  
This article is open for education about self-archiving.

**Hope for IR**  
Manuscript writing support is longed-for function.

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**Hope for IR** Grounds for this proposal

- 5-year-experience of my "Manuscript writing support system" (see Slide 40, Ref. 5)

- File retrieval including figures
- Management of deadlines & self-archiving

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**CONCLUSION** My joy of self-archiving

**Motivation**

Want to share living lessons beyond specialties.

**Benefit**

Once remove barriers, get many responses

**Proposals**

IR should be the killer application for scholars

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## Acknowledgement

## Thank you for their help

- Mr. K. Hanaka & Mr. K. Aizawa (Photron Ltd.)
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- Ms. A. Hasebe (Editor of Engineering Materials)
- Prof. S. Nishiyama (Chiba Univ.)
- Prof. T. Fujiwara (Tohoku Univ.)
- Ms. M. Tanifuji, Dr. M. Takaku & Dr. S. Ohtsuka  
(Scientific Information Office, NIMS)

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## References

Self-archiving 

4. S. Todoroki: "Disseminate your work beyond your research field through self-archiving" (2008). (Translated from *Materials Integration*, **21** [12] pp.75-76, 2008).

[http://www.geocities.jp/tokyo\\_1406/](http://www.geocities.jp/tokyo_1406/)



<http://pubman.mpdl.mpg.de/>

<http://www.scribd.com/trks>

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## References

Serendipity 

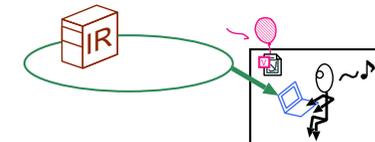
1. S. Todoroki: "Make the best use of your serendipity by inspiring your audience". (Translated from *OYO BUTURI*, **78** [7] pp.668-671, 2009.)
2. S. Todoroki: "Two serendipitous episodes – How I embarked on fiber fuse research" (2007). (Translated from two articles; *Electric Glass*, **35**, pp. 14-18, 2006 and *Engineering Materials*, **55** [4], pp. 97-101, 2007).
3. S. Todoroki: "Chance favors the prepared mind" (2009). (Translated from a short essay for non-science oriented readers).

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## References

## Cradle to Archive

5. S. Todoroki: "Manuscript writing support system for researchers based on hypertext list of their achievements" (2008). (Translated from *Ceramics Japan*, **42** [7] pp.520-524, 2007).



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