Photobook of MANA's History

(2007 – 2021)

Edited by :

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Spread of ripples of nanoarchitectonics to the world.

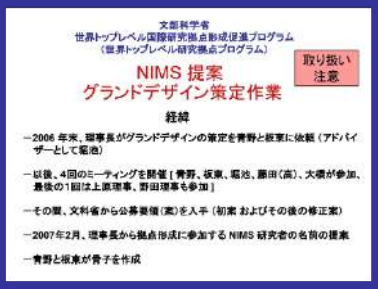
PREFACE

2007年、文部科学省は「世界トップレベル研究拠点プログラム」（WPI）を発足し、我々の NIMS はそれに応募して採択されました（日本全国で 5 拠点が採択）。こうして我々の MANA（International Center for Materials Nanoarchitectonics）がスタートしました。来年は15周年を迎えます。この間、MANA は世界のナノサイエンスとナノテクノロジーに多大の貢献をしてきたと自負しています。この機会に、その歴史を振り返るため、この写真集をまとめることにしました。

In 2007, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan created the WPI (World Premier International Research Center Initiative) Project. Our NIMS (National Institute for Materials Science) made application for it and the application was successfully adopted. As a result, MANA (International Center for Materials Nanoarchitectonics) was established. MANA is proud to have made significant contributions to nanoscience and technology around the world. Next year, MANA will reach a milestone of 15th anniversary. To look back its history, we have compiled this photobook.

文部科学省「WPI 事業」(2007年発足)への NIMS からの応募のグランドデザインを策定（2007 年 2 月～ 8 月）

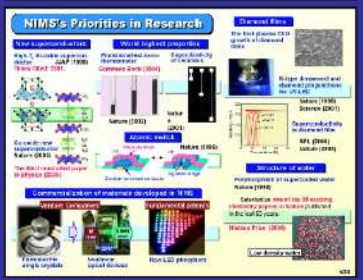
Creating a grand design for a new research center



Cover page (34 pages in total)

ヒアリング（2007年8月）において用いたスライド

Slides used for hearing (30 slides in total)



WPI 事業の研究拠点としてMANAが採択された (2007年)

（5 WPI 拠点の 1 つとして）

MANA was selected as one of 5 WPI centers.

採択拠点を知らせる広報資料

Appointed WPI centers: press-release

World Premier International Research Center (WPI) Initiative
MEXT
Japan

Selected Projects

Host institution	Tohoku University	The University of Tokyo	Kyoto University	Osaka University	National Institute for Materials Science
Center name	WPI Advanced Institute for Materials Research (AIMR)	Institute for the Physics and Mathematics of the Universe (IPMU)	Institute for Integrated Cell-Material Sciences (iCeMS)	Osaka University Immunology Frontier Research Center (IFReC)	International Center for Materials Nanoarchitectonics (MANA)
Center Director	Yoshinori Yamamoto	Hitoshi Murayama	Norio Nakatsuji	Shizuo Akira	Masakazu Aono
Chief Project Officer	Yoshihisa Inoue	Hiroshi Komiyama	Kazuo Oike	Kiyokazu Washida	Teruo Kishi

MANA発足当初の組織図

Organization of MANA at the beginning

Advisors included:

Heini Rohrer
Nobel Prize in Physics (1986)

Harry Kroto
Nobel Prize in Chemistry (1996)

7 Satellite Labs. of MANA
(Four in the abroad and three in Japan)

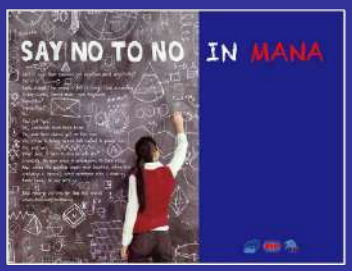
MANA発足当初の４つの海外サテライト研究所

Four Satellite Labs. of MANA in the abroad at the beginning

Spirit & Policy of MANA

Vision, Mission, Research Direction and Challenges

Panels placed in the entrance lobby of the WPI-MANA building (shown for example)

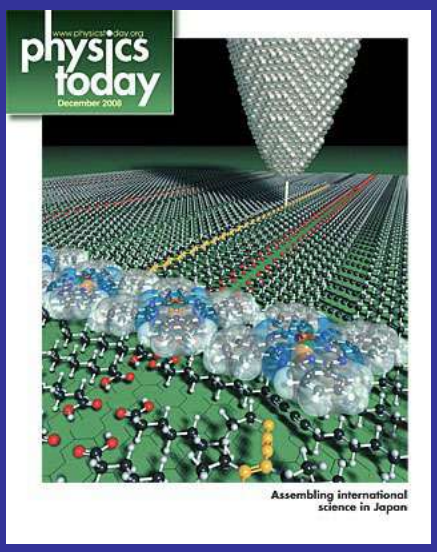


MANA はスタート当初から注目された

NHK ニュース “おはようニッポン”で
活動が紹介された（ NHK morning news ）

December 11, 2008

当時の研究が
Physics today の coverに



December 2008

(These are only examples !!)

2011. 3. 11　東日本大震災
マグニチュード9.0（震源地は福島県沖）

Great East Japan Earthquake
Magnitude: 9.0
(Epicenter was off the coast of Fukushima prefecture)


Fortunately, Tsukuba City was not seriously damaged. However, MANA's research facilities were considerably damaged.





復興を願うポスター
Poster wishing for recovery

(Made by M. Aono and 20 copies were posted in the building by himself on the next day.)

Recovery !!!
after a month (April 2011)




One billion yen was spent.

WPI-MANA 新棟の竣工（増設）！！！

Completion of WPI-MANA New Building (2012)

理論研究棟の新設

Completion of
Theoretical Research
Building (2013)

WPI-MANA 棟の竣工式典

Completion Ceremony of
WPI-MANA New Building
新棟内のオーディトリアムにて
（2012年7月5日）

Views in WPI-MANA building (2012)

Solaring
entrance hall

Lab space

Interaction space

Office space

Auditorium

Materials Nanoarchitectonicsが生み出す芸術
Materials Nano Art (MANAのArt)

WPI-MANA新棟とMANA旧棟を結ぶ連結陸橋

New WPI-MANA Building --- Overpass --- Old MANA Building

この 陸橋 は 「ひらめきの回廊」 “Pathway for Brainstorming” と呼ばれている。

“Your old idea will be renewed”

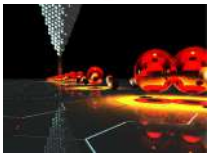
“Your new idea will be deepened”

Your brainstorming is enhanced by these scientific art pictures created by your colleagues in MANA (selected).

Art_09

Art_12

Art_65



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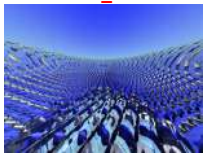
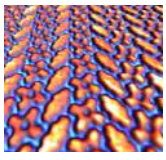


Art_23

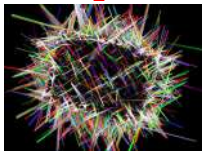
Art_40

Art_30



Art_07

Art_206



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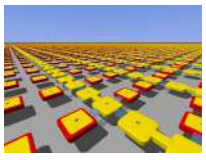


Art_339

Art_307

Art_217

Art_431

Art_412

Art_606

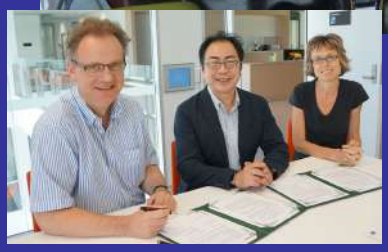
Art_604

People supported MANA (1)

(many more indeed)

People supported MANA (2)

(many more indeed)



People supported MANA (3)

(many more indeed)

MANA の組織の変遷

Changes in MANA organization (only for selected years)

2009

2010

2012

2015

2016

2018

2021

Message from the new director of MANA
Dr. Takashi Taniguchi

https://www.nims.go.jp/mana/jp/about/message.html

MANA has been opening "*MANA International Symposium*" every year (2008-2021)

Inauguration of MANA

1st symposium

Most recent symposium

2021

We are sorry to announce that Prof. Winnik passed away just before the symposium

MANA has been publishing MANA News Letter "CONVERGENCE" regularly

(Japanese and English versions at the same time)

創刊号 (No. 1)
(February 2009)

MANA 10周年記念号 (No. 25)
(February 2017)

最新号 (No. 28)
(March 2021)

MANA has been opening "MANA Special Seminar" regularly to promote collaboration between researchers of MANA

Brochure of the 464th MANA Special Seminar as an example (April 10, 2015)

MANA has been opening "MANA Annual Party" (not necessarily every year)

Poster of its 2017 version (10th Anniversary of MANA)

G7 Summit 2016 was held in Japan

In relation to the Summit,
G7 Science and Technology Ministers had a meeting in Tsukuba Science City and visited MANA (May 27, 2016).

Briefing at the entrance of WPI-MANA Building

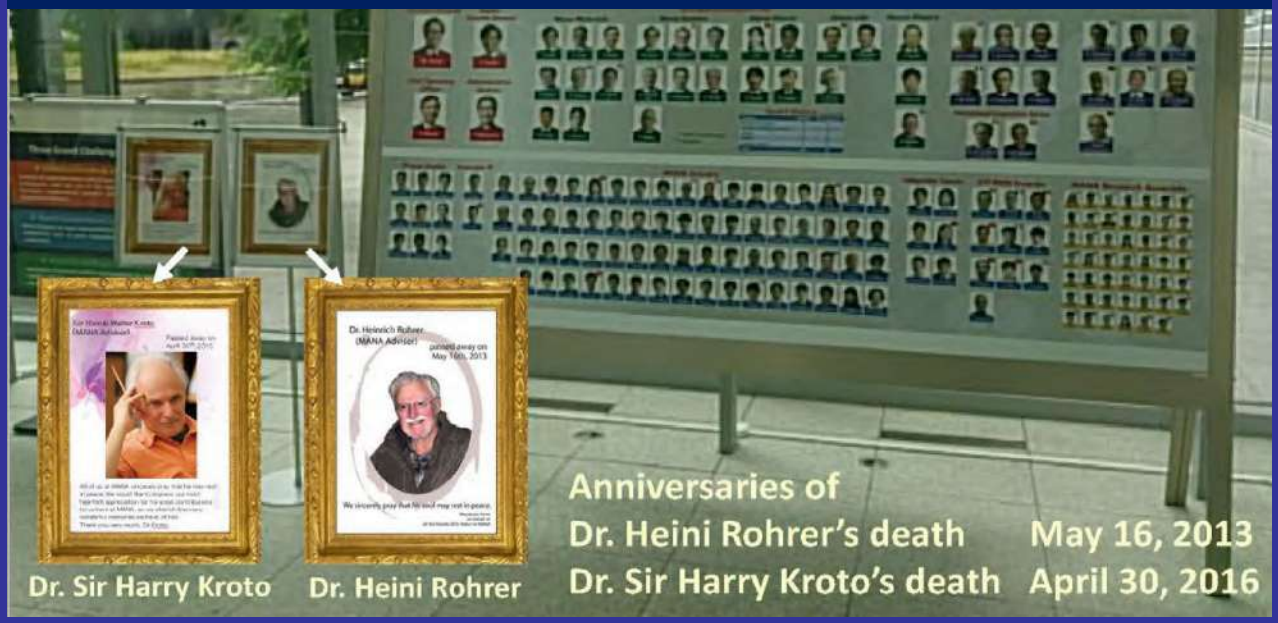
Briefing Tour to several laboratories in MANA

During the tour course, *almost all* ministers took a picture of this panel.

The day, May 16, 2016, when G7 Science and Technology Ministers visited our MANA/NIMS,
was the third anniversary of Dr. Heini Rohrer's death in 2013.
He was a great Advisor of MANA.

We were very sorry to announce, on the same day, that Dr. Sir Harry Kroto had passed away two weeks ago. He was also a great Advisor of MANA.

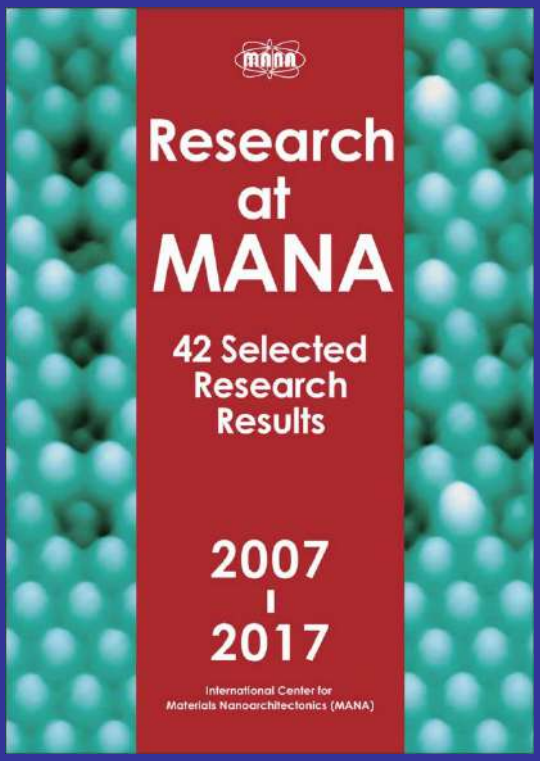
They were both lovely Novel laureates.

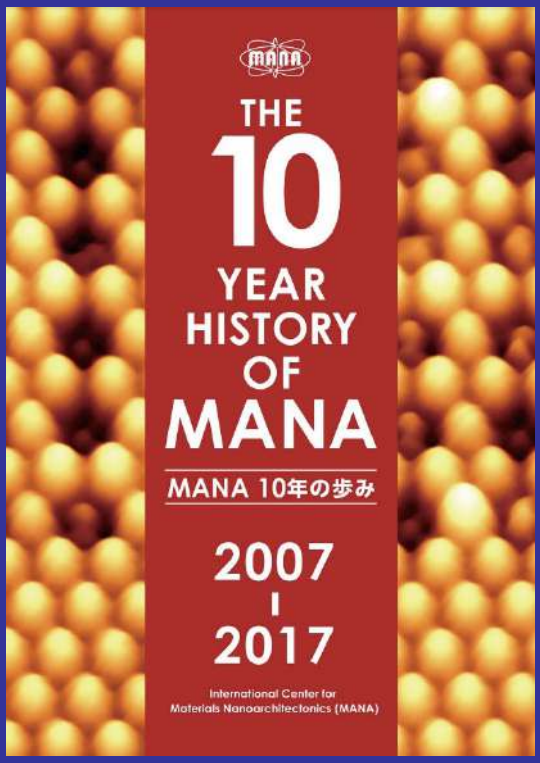


Front Lobby of WPI-MANA Building

MANA 10th Anniversary

Two commemorative books were published.





Words sent to MANA's 10th anniversary
(CONVERGENCE No.25)

WPI の MANA 担当の Program Officer (PO)

MANA has been opening various international meetings

● **Atomic Switch: Invention, Practical Use and Future Prospects** at MANA Mar 28, 2017

● **2nd International Symposium on the Functionality of Organized Nanostructures**

in Tokyo
Nov 26-28, 2014

● **International Symposium on Smart Biomaterials**

at MANA
Mar 24-25
2014

● **International Workshop: Topology in the New Frontiers of Materials Science**

at MANA
Apr 1-2
2014

● **Japan-Taiwan Joint Workshop on Nanospace Materials** March 11-12, 2014

● **12th International Workshop on Beam Injection Assessment of Microstructures in Semiconductors (BIAMS 12)** June 22-26, 2014

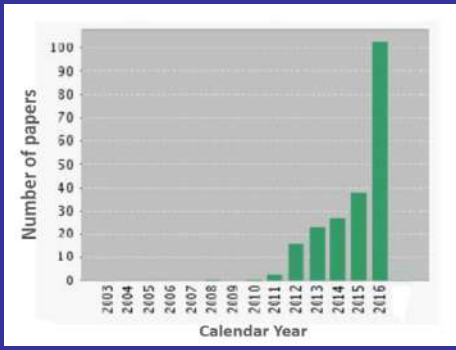
● **5th NIMS/MANA-Waseda University International Symposium** March 24-25, 2014

● **International Symposium on Material Architectonics for Sustainable Action (MASA 2014)** July 18, 2014

77th Anniversary of Dr. Heini Rorer who supported MANA as an Advisor

Dr. Heini Rohrer's 77th Anniversary at Tsukuba, Japan (2011)

Number of papers in which the word "Nanoarchitectonics" is used in title, abstract or key words (from Web of Science).



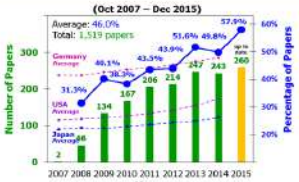
MANA's Activities (1/2) (not necessarily most updated)

Thomson-Reuters Corp. & Elsevier Corp.

Total number of papers: 5,848

Internationally co-authored papers: 1,519

Recently, more than 50% of MANA's papers are internationally co-authored

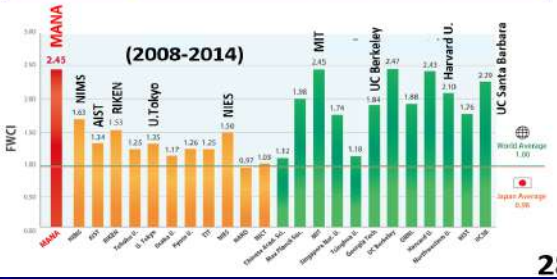


Number of top 1% papers: 106

FWCI

Field-weighted citation impact (FWCI): 2.45

$$\text{FWCI} = \frac{1}{N}\sum_{i=1}^{N}\frac{c_i}{e_i}$$



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MANA's Activities (2/2) (not necessarily most updated)

External research funds: ~750 M Yen / year

(Million Yen)

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	計
Competitive fund	24	24	128	176	265	295	359	1,271
Collaboration with private companies	403	182	364	392	260	405	398	2,404
Total	427	206	492	568	525	700	757	3,675

Number of registered patents: 581

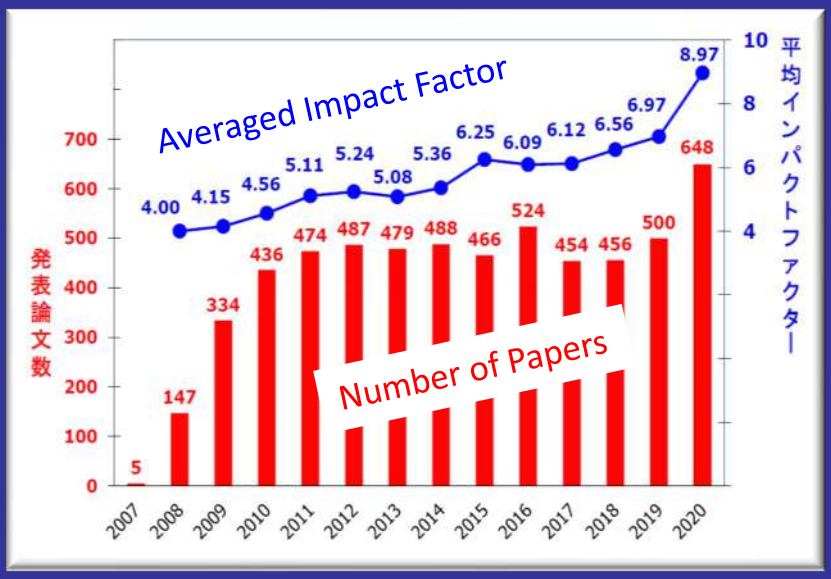
Lots of applications for collaboration

MOU

(valid MOUs, as of March 31, 2016)

10 Asia
9 Europe
5 North America
4 Australia
1 South America

29



As of July 6, 2021

We pray for the continued prosperity of MANA/NIMS.

Editors: M. Aono
T. Nakayama

World Premier International
Research Center Initiative

International Center for
Materials Nanoarchitectonics

National Institute for
Materials Science

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