15th Materials Science School for Young Scientists (KINKEN WAKATE 2018)

&

Symposium of 30th Anniversary of Nano Crystalline Soft Magnetic Alloys (FINEMET 30)

August 29 (Wed) – 31 (Fri) 2018
Institute for Materials Research, Tohoku University, Japan

Program and Abstracts

Organizing Committee:
15th Materials Science School for Young Scientists (KINKEN WAKATE 2018)
Chair: Hidemi Kato (Tohoku University)

Symposium of 30th Anniversary of Nano Crystalline Soft Magnetic Alloys (FINEMET 30)
Chair: Masato Ohnuma (Hokkaido University)
Junji Saida (Tohoku University)

Committee member
Teruo Bitoh (Akita Prefectural University)
Kiyonori Suzuki (Monash University)
Motoki Ohta (Hitachi Metals, Ltd.)
Giselher Herzer (Vacuumschmelze GmbH & Co. KG)
Kenji Amiya (Tohoku University)

Supported by
・International Collaboration Center (ICC-IMR), IMR, Tohoku University
・Creation of Life Innovation Materials for Interdisciplinary and International Research Development, Tohoku University

Schedule at a Glance

	Wed (Aug 29) **KINKEN WAKATE 2018 & FINEMET 30**
16:30-17:00	Registration
17:00-17:30	(Opening talk)　Masato OHNUMA

	Thu (Aug 30) **KINKEN WAKATE 2018**	
9:00-10:30	Registration	(Tutorial 1)　Yoshihito YOSHIZAWA
10:30-10:40		Break
10:40-12:10		(Tutorial 2)　Giselher HERZER
12:10-13:30		Lunch break
13:30-15:00		(Tutorial 3)　Kiyonori SUZUKI
15:00-15:10		Break
15:10-16:40		(Tutorial 4)　Michael E. MCHENRY
16:40-16:50		Break
16:50-18:05	Oral Presentation by 3 young researchers （20min+5min discussion)	
18:30-20:30	Party　Restaurant Hagi in Tohoku Univ. Katahira campus	

	Fri (Aug 31) **FINEMET 30**	
9:10-10:00	Registration	(Key note 1) Giselher HERZER
10:00-10:10		Break
10:10-11:00		(Key note 2) Michael E. MCHENRY
11:00-11:10		Break
11:10-12:00		(Key note 3) Kiyonori SUZUKI
12:00-13:10	Lunch break	
13:10-13:40	(Invited talk 1) Shigehiro OHNUMA	
13:40-14:10	(Special invited talk) Yoshihito YOSHIZAWA	
14:10-14:45	(Invited talk 2) Ivan SKORVANEK	
14:45-14:55	Break	
14:55-15:30	(Invited talk 3) Motoki OHTA	
15:30-16:00	(Invited talk 4) Kenji AMIYA	
16:00-16:35	(Invited talk 5) Nicoleta LUPU	
16:35-16:45	Break	
16:45-17:10	(Oral contribution 1) Junji SAIDA	
17:10-17:35	(Oral contribution 2) Hidemi KATO	
17:35-18:00	(Oral contribution 3) Masato OHNUMA	

Technical Program

Wed, August 29

Opening Session (17:00-17:30)

Opening talk

"30th Anniversary of "FINEMET""

Masato OHNUMA, Hokkaido University, Japan

Thu, August 30

15th Materials Science School for Young Scientists (KINKEN WAKATE 2018)

Lecture 1 (9:00-12:10)

Tutorial 1

"Fe-based nanocrystalline soft magnetic alloys and their applications"

Yoshihito YOSHIZAWA, High Energy Accelerator Research Organization (KEK), Japan, inventor of FINEMET

Tutorial 2

"Amorphous and Nanocrystalline Materials for Soft Magnetic Applications"

Giselher HERZER, Vacuumschmelze GmbH & Co. KG, Germany

Lecture 2 (13:30-16:40)

Tutorial 3

"Fe-M-B (M = IVa TO VIa METAL) NANOCRYSTALLINE SOFT MAGNETIC MATERIALS
A Review of Alloy Development"

Kiyonori SUZUKI, Monash University, Australia

Tutorial 4

"METAL AMORPHOUS NANOCOMPOSITE (MANC) MATERIALS & DEVICES FOR POWER MAGNETIC APPLICATIONS"

Michael E. MCHENRY, Carnegie Mellon University, USA

Young Session (16:50-18:05)

Young 1

"The effect of Co addition on magnetic and structural properties of nanocrystalline (Fe,Co)-Si-B-P-Cu alloys"

Markus KUHNT, Technical University Darmstadt, Germany

Young 2

"Nanocrystalline glass covered microwires"

Sorin CORODEANU, National Institute of Research and Development for Technical Physics, Romania

Young 3

"Development of Fe-Si-B-Cu soft magnetic nanocrystalline alloys with high Cu concentrations"

Yanhui LI, Dalian University of Technology, China

Fri, August 31

Symposium of 30th Anniversary of Nano Crystalline Soft Magnetic Alloys (FINEMET 30)

Session 1 (9:10-12:00)

Key note 1

"The Random Anisotropy Model"

Giselher HERZER, Vacuumschmelze GmbH & Co. KG, Germany

Key note 2

"Tunable Resistivities and Strain Induced Anisotropy in Metal Amorphous Nanocomposites with Multiple Nanocrystalline Phases"

Michael E. MCHENRY, Carnegie Mellon University, USA

Key note 3

"Are copper and early transition metals essential for magnetically soft nanostructures?"

Kiyonori SUZUKI, Monash University, Australia

Session 2 (13:10-14:45)

Invited talk 1

"Nanogranular magnetic films for applications as high frequency soft magnets"

Shigehiro OHNUMA, Research Institute for Electromagnetic Materials, Japan

Special invited talk

"Development of Fe-based Nanocrystalline Soft Magnetic Alloys"

Yoshihito YOSHIZAWA, High Energy Accelerator Research Organization (KEK), Japan, inventor of FINEMET

Invited talk 2

"Soft magnetic nanocrystalline bilayer ribbons for sensor applications"

Ivan SKORVANEK, Slovak Academy of Sciences, Slovakia

Session 3 (14:55-16:35)

Invited talk 3

“Fabrication of High B_S Fe-based nanocrystalline alloy ribbon and magnetic properties of their cores”

Motoki OHTA, Hitachi Metals, Ltd., Japan

Invited talk 4

“Inverse Magnetostrictive Properties and Application of (Fe, Co)-Si-B-Nb Amorphous Alloys”

Kenji AMIYA, Tohoku University, Japan

Invited talk 5

”Ultrathin Nanocrystalline Magnetic Wires”

Nicoleta LUPU, National Institute of Research and Development for Technical Physics, Rumania

Session 4 (16:45-18:00)

Oral contribution 1

“Thermal rejuvenation in metallic glasses for improved plasticity”

Junji SAIDA, Tohoku University, Japan

Oral contribution 2

“Dynamic study of primary and secondary relaxations in Pd-Ni-Cu-P glass”

Hidemi KATO, Tohoku University, Japan

Oral contribution 3

“Role of Amorphous Phase”

Masato OHNUMA, Hokkaido University, Japan

Venue

Location: Institute for Material Research, Tohoku University
Katahira 2-1-1, Aoba-ku, Sendai, Miyagi, 980-8577, Japan

Aug 29 – 30
International Center of Educational Research Building,
2nd floor Seminar room 1

Aug 30 party
Restaurant Hagi

Aug 31
IMR Building 2, Auditorium

