# Vol.2 table of contents (2009)

## Vol.2 No.1

Research	papers
----------	--------

Predictive modeling of everyday behavior from large-scale data		
— Learning and inference from Bayesian networks based on actual services — Y. Motomura	1-12	
Expansion of organic reference materials for the analysis of hazardous substances in food and the environment		
— Realization of an efficient metrological traceability using the quantitative NMR method—		
T. Ihara, T. Saito and N. Sugimoto	13-24	
Modeling the social acceptance of industrial technologies		
— Development of an eco-product diffusion analysis model that incorporates three existing models—		
M. Matsumoto and S. Kondoh	25-34	
How Grid enables E-Science?		
— Design and implementation of the GEO Grid — Y. Tanaka	35-44	
Basic materials research for the development of ubiquitous-energy devices		
— Applications to positive electrode materials of Li-ion batteries, electrode catalysts of proton-exchange fuel		
cells and gold catalysts — M. Kohyama, T. Akita, S. Tanaka, Y. Maeda, K. Tanaka, K. Okazaki and J. Kikkawa 45-		
Innovation in distillation processes		
— Process intensification for energy savings through concept of "detuning" from ideal state—		
M. Nakaiwa and T. Ohmori	55-63	
Advanced in-silico drug screening to achieve high hit ratio		
— Development of 3D-compound database —		
Y. Fukunishi, Y. Sugihara, Y. Mikami, K. Sakai, H. Kusudo and H. Nakamura	64-72	
Round-table talk		
One-year anniversary of Synthesiology	73-78	
Vol.2 No.2		
Vol.2 No.2 Research papers		
Vol.2 No.2  Research papers  A study of paleoearthquakes at archeological sites	04.04	
Vol.2 No.2  Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa	84-94	
Vol.2 No.2  Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries		
Vol.2 No.2  Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato	84-94 95-106	
Vol.2 No.2  Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility	95-106	
Vol.2 No.2  Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue	95-106	
Vol.2 No.2  Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components	95-106 107-120	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys — M. Sakamoto and H. Ueno	95-106 107-120	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology— A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization— S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system— Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys— M. Sakamoto and H. Ueno  A strategy to reduce energy usage in ceramic fabrication	95-106 107-120 121-131	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys — M. Sakamoto and H. Ueno	95-106 107-120 121-131	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys — M. Sakamoto and H. Ueno  A strategy to reduce energy usage in ceramic fabrication  — Novel binders and related processing technology — K. Watari, T. Nagaoka, K. Sato and Y. Hotta  Development of high-sensitivity molecular adsorption detection sensors	95-106 107-120 121-131	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology— A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization— S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system— Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys— M. Sakamoto and H. Ueno  A strategy to reduce energy usage in ceramic fabrication  — Novel binders and related processing technology— K. Watari, T. Nagaoka, K. Sato and Y. Hotta	95-106 107-120 121-131	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys — M. Sakamoto and H. Ueno  A strategy to reduce energy usage in ceramic fabrication  — Novel binders and related processing technology — K. Watari, T. Nagaoka, K. Sato and Y. Hotta  Development of high-sensitivity molecular adsorption detection sensors	95-106 107-120 121-131 132-141	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology— A. Sangawa High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization— S. Osawa, T. Takatsuji and O. Sato A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system— Y. Satoh and K. Sakaue Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys— M. Sakamoto and H. Ueno A strategy to reduce energy usage in ceramic fabrication  — Novel binders and related processing technology— K. Watari, T. Nagaoka, K. Sato and Y. Hotta Development of high-sensitivity molecular adsorption detection sensors  — Biomolecular detection for highly-developed diagnosis, medication, and medical treatments—  — M. Fujimaki and K. Awazu Study on the PAN carbon-fiber-innovation for modeling a successful R&D management	95-106 107-120 121-131 132-141	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys — M. Sakamoto and H. Ueno  A strategy to reduce energy usage in ceramic fabrication  — Novel binders and related processing technology — K. Watari, T. Nagaoka, K. Sato and Y. Hotta  Development of high-sensitivity molecular adsorption detection sensors  — Biomolecular detection for highly-developed diagnosis, medication, and medical treatments —  — M. Fujimaki and K. Awazu  Study on the PAN carbon-fiber-innovation for modeling a successful R&D management  — An excited-oscillation management model —	95-106 107-120 121-131 132-141 142-153	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys — M. Sakamoto and H. Ueno A strategy to reduce energy usage in ceramic fabrication  — Novel binders and related processing technology — K. Watari, T. Nagaoka, K. Sato and Y. Hotta Development of high-sensitivity molecular adsorption detection sensors  — Biomolecular detection for highly-developed diagnosis, medication, and medical treatments — M. Fujimaki and K. Awazu Study on the PAN carbon-fiber-innovation for modeling a successful R&D management  — An excited-oscillation management model — O. Nakamura, T. Ohana, M. Tazawa, S. Yokota, W. Shinoda, O. Nakamura and J. Itoh	95-106 107-120 121-131 132-141 142-153	
Research papers  A study of paleoearthquakes at archeological sites  — A new interdisciplinary area between paleoseismology and archeology — A. Sangawa  High accuracy three-dimensional shape measurements for supporting manufacturing industries  — Establishment of the traceability system and standardization — S. Osawa, T. Takatsuji and O. Sato  A secure and reliable next generation mobility  — An intelligent electric wheelchair with a stereo omni-directional camera system — Y. Satoh and K. Sakaue  Energy savings in transportation systems by weight reduction of their components  — Research and development of non-combustible magnesium alloys — M. Sakamoto and H. Ueno  A strategy to reduce energy usage in ceramic fabrication  — Novel binders and related processing technology — K. Watari, T. Nagaoka, K. Sato and Y. Hotta  Development of high-sensitivity molecular adsorption detection sensors  — Biomolecular detection for highly-developed diagnosis, medication, and medical treatments —  — M. Fujimaki and K. Awazu  Study on the PAN carbon-fiber-innovation for modeling a successful R&D management  — An excited-oscillation management model —	95-106 107-120 121-131 132-141 142-153	

--- Y. Ohno, A. Ono and M. Tanaka

#### Vol.2 No.3

#### Research papers

Evaluation of earthquake occurrence from active faults

- Evaluation of rupture probabilities of active faults using the Cascade Earthquake Model based on

behavioral segmentation — --- T. Yoshioka 177-183

Two types of lead users in a model for the transfer of technology into households

—The development and diffusion of induction heating cookery— --- Y. Kubo and Y. Baba 184-193

Creating non-volatile electronics by spintronics technology

—Toward developing ultimate green IT devices—

--- S. Yuasa, H. Kubota, A. Fukushima, K. Yakushiji, T. Nagahama, Y. Suzuki and K. Ando 194-205

A marked improvement in the reliability of the measurement of trace moisture in gases

— Establishment of metrological traceability and a performance evaluation of trace moisture analyzers —

--- H. Abe 206-220

Development of battery-operated portable high-energy X-ray sources

— Innovation in X-ray nondestructive evaluation —

--- R. Suzuki 221-228

#### **Vol.2 No.4**

### Research papers

Development of a real-time all-in-focus microscope

--- WYSIWYG in the micro-world --- -- K. Ohba 234-245

Portable national length standards designed and constructed using commercially available parts

— An advanced mechanical design for the iodine stabilized He-Ne laser — --- J. Ishikawa 246-257

How the reliable environmental noise measurement is ensured

— Development of acoustic standards and a new calibration service system— --- R. Horiuchi 258-269

Bioethanol production from woods with the aid of nanotechnology

— Pretreatment for enzymatic saccharification using natural structure of cellulose— --- T. Endo 270-281

#### Interview

Restoration of engineering and Synthesiology

----- K. Nagai and A. Ono 282-287