

Vol.5 table of contents (2012)**Vol.5 No.1****Research papers**

- Construction of a traceability matrix for high quality project management
 – *A proposal of a basic theory toward a change from process-centric management to information-centric project management* –
 - - - A. SAKAEDANI, Y. OHKAMI and N. KOHTAKE 1-16
- Research and development of a monopivot centrifugal blood pump for clinical use
 – *Collaboration for a product between medical and engineering teams* –
 - - - T. YAMANE, O. MARUYAMA, M. NISHIDA and R. KOSAKA 17-24
- An analysis method for oxygen impurity in magnesium and its alloys
 – *International standardization activity in parallel with R&D* –
 - - - A. TSUGE and W. KANEMATSU 25-36
- Analysis of synthetic approaches described in papers of the journal *Synthesiology*
 – *Towards establishing synthesiological methodology for bridging the gap between scientific research results and society* –
 - - - N. KOBAYASHI, M. AKAMATSU, M. OKAJI, S. TOGASHI, K. HARADA and N. YUMOTO 37-55
- Durable polymer electrolyte fuel cells (PEFC) for residential co-generation application
 – *Elucidation of degradation mechanism to establish an accelerated aging test method of PEFC* –
 - - - T. TANIMOTO, K. YASUDA, Z. SIROMA, T. AKITA and T. KOBAYASHI 56-64

Report

- Synthesiology Workshop at the Annual Meeting of the Japan Society for Science Policy and Research Management (JSSPRM)
 – *Synthesiology through knowledge integration to innovation* –
 65-72

Vol.5 No.2**Research papers**

- Paleoclimate reconstruction and future forecast based on coral skeletal climatology
 – *Understanding the oceanic history through precise chemical and isotope analyses of coral annual bands* –
 - - - A. SUZUKI 78-87
- Development of methane hydrate production method
 – *A large-scale laboratory reactor for methane hydrate production tests* –
 - - - J. NAGAO 88-95
- Toward the integrated optimization of steel plate production process
 – *A proposal for production control by multi-scale hierarchical modeling* –
 - - - K. NISHIOKA, Y. MIZUTANI, H. UENO, H. KAWASAKI and Y. BABA 96-113
- Information sharing platform to assist rescue activities in huge disasters
 – *System linkage via data mediation* –
 - - - I. NODA 114-127
- Round-table Talks**
- Science and technology policy and synthesiology – Bridging science and values 128-133

Vol.5 No.3**Research papers**

- Developing an evaluation system of visually induced motion sickness for safe usage of moving images
 – *Fermentation of a social understanding to supply secure and comfortable images through integration of researches on human characteristics, image analysis technique and image production technique* –
 - - - H. UJIKE 139 - 149
- Spinning process using robot technology
 – *Field-based bricolage of manufacturing technology* –
 - - - H. ARAI 150 - 159
- International cooperation for the utilization of earth observational data in an integrated manner
 – *Development of de jure standardization of the common infrastructure for the global earth observation system of systems* –
 - - - K. IWAO 160 - 170
- Development of a pressure sensor using a piezoelectric material thin film
 – *Application to a combustion pressure sensor for mass-produced cars* –
 - - - M. AKIYAMA, T. TABARU and K. KISHI 171 - 180
- Novel functional gels and their commercial distribution as chemical reagents
 – *New development of functional soft-materials* –
 - - - M. YOSHIDA 181 - 189
- Evaluating the effects of actions taken to attract visitors to sightseeing areas
 – *An Open Service Field behavior survey technology* –
 - - - Y. YAMAMOTO 190 - 200
- Development of basic tools for glycoscience and their application to cancer diagnosis
 – *A 10-year strategy of the Research Center for Medical Glycoscience of AIST* –
 - - - H. NARIMATSU 201 - 215

Round-table Talks

- Creation of values and synthesis 216 - 222

Vol.5 No.4**Research papers**

- Dose standards for safe and secure breast cancer screening
 – *Establishment of X-ray dose standards for mammography and construction of a calibration service system* –
 - - - T. TANAKA, T. KUROSAWA and N. SAITO 228 - 240
- Reconstruction of the 869 Jogan tsunami and lessons from the 2011 Tohoku earthquake
 – *Significance of ancient earthquake studies and problems in announcing study results to society* –
 - - - Y. OKAMURA 241 - 250
- Evaluating uncertainty for the standardization of single cell/stack power generation performance tests for SOFC
 – *Standardizing test methods and ensuring reliability of test results for the commercialization of SOFC* –
 - - - A. MOMMA, K. TAKANO, Y. TANAKA and T. KATO 251 - 261
- Development of switchable mirror glass
 – *R&D strategy toward its practical use* –
 - - - K. YOSHIMURA, K. TAJIMA and Y. YAMADA 262 - 269
- Standardization of environmental analysis methods of hazardous chemicals
 – *Contribution to international control of hazardous chemicals by using advanced technologies* –
 - - - S. TANIYASU, N. HANARI, Y. HORII and N. YAMASHITA 270 - 286