

## List of Publications (Journal Papers)

**Manabu Kano**

2012-            Dept. of Systems Science, Kyoto University, Japan

1994-2012    Dept. of Chemical Engineering, Kyoto University, Japan

[ Most Cited Papers on December 2014 (SCOPUS) ]

- 1)    Manabu Kano, Shouhei Tanaka, Shinji Hasebe, Iori Hashimoto, Hiromu Ohno: **Monitoring Independent Components for Fault Detection**. *AIChE Journal*, Vol.49, No.4, pp. 969-976 (2003) [cited by 200]
- 2)    Manabu Kano, Yoshiaki Nakagawa: **Data-Based Process Monitoring, Process Control, and Quality Improvement: Recent Developments and Applications in Steel Industry**. *Computers & Chemical Engineering*, Vol.32, No.1-2, pp.12-24 (2008) [cited by 140]
- 3)    Manabu Kano, Koichi Miyazaki, Shinji Hasebe, Iori Hashimoto: **Inferential Control System of Distillation Compositions Using Dynamic Partial Least Squares Regression**. *Journal of Process Control*, Vol.10, No.2-3, pp.157-166 (2000) [cited by 122]
- 4)    Manabu Kano, Hiromu Ohno, Shinji Hasebe, Iori Hashimoto: **A New Multivariate Statistical Process Monitoring Method Using Principal Component Analysis**. *Computers & Chemical Engineering*, Vol.25, No.7-8, pp.1103-1113 (2001) [cited by 95]
- 5)    Manabu Kano, Koji Nagao, Hiromu Ohno, Shinji Hasebe, Iori Hashimoto, Ramon Strauss, Bhavik R. Bakshi: **Comparison of Multivariate Statistical Process Monitoring Methods with Applications to the Eastman Challenge Problem**. *Computers & Chemical Engineering*, Vol.26, No.2, pp.161-174 (2002) [cited by 92]

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- 1)    Toshiya Hirai and Manabu Kano: Adaptive Virtual Metrology Design for Semiconductor Dry Etching Process through Locally Weighted Partial Least Squares. *IEEE Transaction on Semiconductor Manufacturing*, accepted
- 2)    Sanghong Kim, Manabu Kano, Hiroshi Nakagawa, Shinji Hasebe: Input Variable Scaling for Statistical Modeling, *Computers & Chemical Engineering*, vol. 74, pp. 59–65 (2015)
- 3)    Iftikhar Ahmad, Manabu Kano, Shinji Hasebe, Hiroshi Kitada, Noboru Murata: **Prediction of Molten Steel Temperature in Steel Making Process with Uncertainty by Integrating Gray-Box Model and Bootstrap Filter**. *Journal*

*of Chemical Engineering of Japan*, Vol. 47, No. 11, pp. 827–834 (2014)

- 4) Masahiro Ono, Reiko J. Tanaka, Manabu Kano: **Visualisation of the T Cell Differentiation Programme by Canonical Correspondence Analysis of Transcriptomes**. *BMC Genomics*, 15:1028 (2014)
- 5) Takuya Miyano, Manabu Kano, Hideaki Tanabe, Hiroshi Nakagawa, Tomoyuki Watanabe, Hidemi Minami: **Spectral Fluctuation Dividing for Efficient Wavenumber Selection: Application to Estimation of Water and Drug Content in Granules Using Near Infrared Spectroscopy**. *International Journal of Pharmaceutics*, Vol. 475, No. 1–2, pp. 504–513 (2014)
- 6) Iftikhar Ahmad, Manabu Kano, Shinji Hasebe, Hiroshi Kitada, Noboru Murata: **Gray-Box Modeling for Prediction and Control of Molten Steel Temperature in Tundish**. *Journal of Process Control*, Vol. 24, Issue 4, pp. 375–382 (2014)
- 7) Hiroshi Nakagawa, Manabu Kano, Shinji Hasebe, Takuya Miyano, Tomoyuki Watanabe, Naoki Wakiyama: **Verification of Model Development Technique for NIR-Based Real-Time Monitoring of Ingredient Concentration During Blending**. *International Journal of Pharmaceutics*, Vol. 471, No. 1–2, pp. 264–275 (2014)
- 8) Zhiqiang Ge, Zhihuan Song, Manabu Kano: **External Analysis-Based Regression Model for Robust Soft Sensing of Multimode Chemical Processes**. *AIChE Journal*, Vol. 60, No. 1, pp. 136–147 (2014)
- 9) Iftikhar Ahmad, Hiroyuki Mabuchi, Manabu Kano, Shinji Hasebe, Yoshikazu Inoue, Hiroaki Uegaki: **Data-Based Ground Fault Diagnosis of Power Cable Systems**. *SICE Journal of Control, Measurement, and System Integration*, Vol. 6, No. 4, pp. 290–297 (2013)
- 10) Sanghong Kim, Manabu Kano, Shinji Hasebe, Akitoshi Takinami, Takeshi Seki: **Long-Term Industrial Applications of Inferential Control Based on Just-In-Time Soft-Sensors: Economical Impact and Challenges**. *Industrial & Engineering Chemistry Research*, Vol. 52, No. 35, pp. 12346–12356 (2013)
- 11) Sanghong Kim, Ryota Okajima, Manabu Kano, Shinji Hasebe: **Development of Soft-sensor Using Locally Weighted PLS with Adaptive Similarity Measure**. *Chemometrics and Intelligent Laboratory Systems*, Vol. 124, pp. 43–49 (2013)
- 12) Jesús Alcántara-Avila, Shinji Hasebe, Manabu Kano: **New Synthesis Procedure to Find the Optimal Distillation Sequence with Internal and External Heat Integrations**, *Industrial & Engineering Chemistry Research*, Vol. 52, No. 13, pp. 4851–4862 (2013)
- 13) Hiroshi Nakagawa, Manabu Kano, Shinji Hasebe, Tatsuya Suzuki, Naoki Wakiyama: **Real-Time Monitoring of Lubrication Properties of Magnesium Stearate**

**Using NIR Spectrometer and Thermal Effusivity Sensor.** *International Journal of Pharmaceutics*, Vol. 441, Issues 1-2, pp. 402-413 (2013)

- 14) Manabu Kano, Koichi Fujiwara: **Virtual Sensing Technology in Process Industries: Trends and Challenges Revealed by Recent Industrial Applications.** *Journal of Chemical Engineering of Japan*, Vol. 46, No. 1, pp. 1-17 (2013)
- 15) Masahiro Ono, Reiko J. Tanaka, Manabu Kano, Toshio Sugiman: **Visualising the Cross-Level Relationships between Pathological and Physiological Processes and Gene Expression: Analyses of Haematological Diseases.** *PLoS ONE*, Vol. 8, Issue 1, e53544 (2013)
- 16) Toshinori Okura, Iftikhar Ahmad, Manabu Kano, Shinji Hasebe, Hiroshi Kitada, Noboru Murata: **High-Performance Prediction of Molten Steel Temperature in Tundish through Gray-Box Model.** *ISIJ International*, Vol. 53, No. 1, pp. 76-80 (2013)
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- 18) S. Sonoda, N. Murata, H. Hino, H. Kitada, M. Kano: **A Statistical Model for Predicting the Liquid Steel Temperature in Ladle and Tundish by Bootstrap Filter,** *ISIJ International*, Vol. 52, No. 6, pp. 1086-1091 (2012)
- 19) J. Rafael Alcantara-Avila, Manabu Kano, and Shinji Hasebe: **Multiobjective Optimization for Synthesizing Compressor-Aided Distillation Sequences with Heat Integration.** *Industrial & Engineering Chemistry Research*, Vol.51, No.17, pp. 5911-5921 (2012)
- 20) Hiroshi Nakagawa, Takahiro Tajima, Manabu Kano, Sanghong Kim, Shinji Hasebe, Tatsuya Suzuki, Hiroaki Nakagami: **Evaluation of Infrared-Reflection Absorption Spectroscopy Measurement and Locally Weighted Partial Least-Squares for Rapid Analysis of Residual Drug Substances in Cleaning Processes.** *Analytical Chemistry*, Vol.84, No.8, pp.3820-3826 (2012)
- 21) Koichi Fujiwara, Manabu Kano, Shinji Hasebe: **Development of Correlation-Based Pattern Recognition Algorithm and Adaptive Soft-Sensor Design.** *Control Engineering Practice*, Vol.20, No.4, pp.371-378 (2012)
- 22) Sanghong Kim, Manabu Kano, Hiroshi Nakagawa, Shinji Hasebe: **Estimation of Active Pharmaceutical Ingredients Content Using Locally Weighted Partial Least Squares and Statistical Wavelength Selection.** *International Journal of Pharmaceutics*, Vol.421, No.2, pp.269-274 (2011)
- 23) Koichi Fujiwara, Manabu Kano, Shinji Hasebe: **Correlation-based spectral clustering for flexible process monitoring.** *Journal of Process Control*, Vol.21, Issue 10, pp.1438-1448 (2011)

- 24) Manabu Kano, Hiroshi Makita, and Shinji Hasebe: **Prediction of Multiple Steady States in Distillation through Simple Mass and Heat Balance Analysis.** *Industrial & Engineering Chemistry Research*, Vol.50, No.3, pp.1346-1351 (2011)
- 25) Hiroyasu Shigemori, Manabu Kano, and Shinji Hasebe: **Optimum Quality Design System for Steel Products through Locally-Weighted Regression Model.** *Journal of Process Control*, Vol.21, Issue 2, pp.293-301 (2011)
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- 28) Manabu Kano and Morimasa Ogawa: **The State of the Art in Chemical Process Control in Japan: Good Practice and Questionnaire Survey.** *Journal of Process Control*, Vol.20, Issue 9, pp.969-982 (2010)
- 29) Hiroyasu Shigemori, Koji Nambu, Ryo Nagao, Tadashi Araki, Narihito Mizushima, Manabu Kano, and Shinji Hasebe: **Plan View Pattern Control for Steel Plates through Constrained Locally Weighted Regression Model.** *Transactions of the Society of Instrument and Control Engineers*, Vol.46, No.8, pp.472-479 (2010) [in Japanese]
- 30) Koji Kawano, Manabu Kano, Shinji Hasebe, and Masakazu Shikano: **Development of a Recipe Design Method Incorporating Uncertainty and Its Application to Resin Compound Product Design.** *Kagaku Kogaku Ronbunshu*, Vol.36, No.4, pp.405-412 (2010) [in Japanese]
- 31) Hiroya Seki, Morimasa Ogawa, Toshiaki Ito, Shigeki Ootakara, Hisashi Murata, Yoshihiro Hashimoto, and Manabu Kano: **Plantwide Control System Design of the Benchmark Vinyl Acetate Monomer Production Plant.** *Computers & Chemical Engineering*, Vol.34, Issue 8, pp.1282-1295 (2010)
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- 33) Shiro Masuda, Manabu Kano, and Yusuke Yasuda: **A Fictitious Reference Iterative Tuning Method with Simultaneous Delay Parameter Tuning of the Reference Model.** *International Journal of Innovative Computing, Information and Control*, Vol.6, No.7, pp. 2927-2939 (2010)
- 34) Koichi Fujiwara, Manabu Kano, Shinji Hasebe, and Akitoshi Takinami: **Soft-Sensor Development Using Correlation-Based Just-In-Time Modeling.** *AIChE*

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- 35) Kenichi Tasaka, Manabu Kano, Morimasa Ogawa, Shiro Masuda, Toru Yamamoto: **Direct PID Tuning from Closed-Loop Data and Its Application to Unstable Processes**. *Transactions of ISCIE*, Vol.22, No.4, pp.137-144 (2009) [in Japanese]
- 36) Manabu Kano, Seunghyun Lee, and Shinji Hasebe: **Two-Stage Subspace Identification for Softsensor Design and Disturbance Estimation**. *Journal of Process Control*, Vol.19, No.2, pp. 179-186 (2009)
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- 39) Yoshiaki Nakagawa, Manbu Kano, Shigemasa Nakagawa, Takashi Tanizaki: **Quality Improvement of Steel Products through Statistical Approach**. *Journal of the Society of Plant Engineers Japan*, Vol.19, No.4, pp.220-227 (2008) [in Japanese]
- 40) Osamu Tonomura, Takayuki Tominari, Manabu Kano, Shinji Hasebe: **Operation Policy for Micro Chemical Plants with External Numbering-up Structure**. *Chemical Engineering Journal*, Vol.135, Supplement 1, S131-S137 (2008)
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