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MULTIVARIATE FEATURE EXTRACTION METHOD FOR SPECTROSCOPY IN PREDICTION AND CLASSIFICATION

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Feature extraction method for spectroscopy is essential for prediction and classification of mixture of compound material. Supervised preserve embedding method is applied for near-infra red or Raman spectra, and the accuracy of geographical origin of agricultural samples enhances. For precision, kernel-based calibration models are combined with multivariate feature selection. Kernel partial least square method and kernel-based support vector regression method are proposed for the specific chemical compositions.

Biography

Hyeseon Lee completed her MS in Statistics department at Cornell University, and PhD at Kyungpook National University in Korea. She had career as a Research Programmer at National Opinion Research Center affiliated at University of Chicago, and as a Statistician in Medical School at University of California, San Diego. Her research interest is feature extraction method for high dimensional data, and applies to chemometrics. Her research work is prediction and classification adopting novel feature method, and also capturing canonical correlation structure. She is a Research Associate Professor in Department of Industrial and Management Engineering at Pohang University of Science and Technology (POSTECH).

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