

## Accepted Manuscript

Rapid determination of rhodium, palladium, and platinum in supported metal catalysts using multivariate analysis of laser induced breakdown spectroscopy data

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PII: S0584-8547(17)30548-7  
DOI: [doi:10.1016/j.sab.2018.04.009](https://doi.org/10.1016/j.sab.2018.04.009)  
Reference: SAB 5413

To appear in: *Spectrochimica Acta Part B: Atomic Spectroscopy*

Received date: 12 November 2017  
Revised date: 9 March 2018  
Accepted date: 12 April 2018

Please cite this article as: Jacob E. Jaine, Michael R. Mucalo , Rapid determination of rhodium, palladium, and platinum in supported metal catalysts using multivariate analysis of laser induced breakdown spectroscopy data. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Sab(2017), doi:[10.1016/j.sab.2018.04.009](https://doi.org/10.1016/j.sab.2018.04.009)

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## Rapid Determination of Rhodium, Palladium, and Platinum in Supported Metal Catalysts using Multivariate Analysis of Laser Induced Breakdown Spectroscopy Data

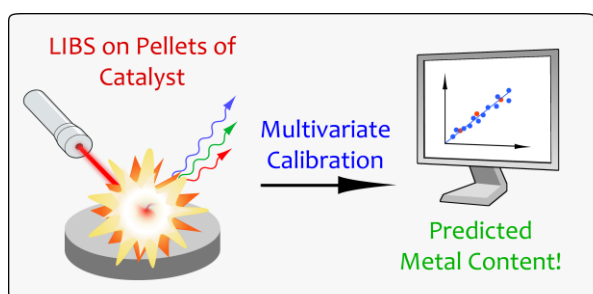
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### Graphical Abstract



### Highlights

- A LIBS method was developed for the analysis of supported catalyst materials.
- Reference materials were prepared and characterised by neutron activation analysis.
- No wet chemical steps are required to prepare the samples.
- Multivariate calibration techniques were used to predict metal content in samples.
- Root mean squared errors as low as 0.1 wt % can be obtained.

### Key Words

Laser induced breakdown spectroscopy, supported metal catalysts, multivariate analysis, platinum metals, partial least squares.

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