

安徽师范大学

ANHUI NORMAL UNIVERSITY

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LIBS group of Anhui Normal University has on the way about 26 years. The first research paper was published in 1994. We hold the 9th CSLIBS conference in 2019. The research is mainly includes:

- A) Mechanism: effects of laser properties (fs and ns laser), ambient atmosphere (Air Pressure, type of gas), additional electric field and physical chemistry properties of target material on plasma (Spatial and temporal resolution of spectral intensity, plasma temperature and electron number density) in laser-matter interaction;*
- B) Analytical method: DP-LIBS, SP-LIBS, CF-LIBS, and Chemometrics;*
- C) Applications: metal, soil, coal ash, and liquid.*

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Contribution in LIBS Conference



1 oral & poster



1 oral



1 oral & poster



1 oral



2 oral



1 oral

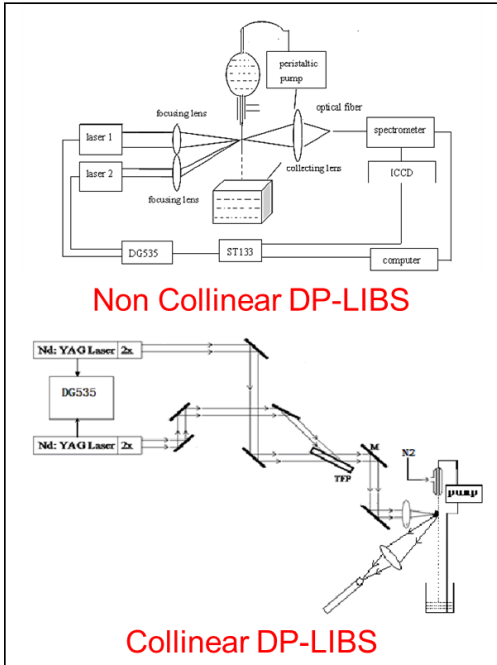


Publications

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Recent work

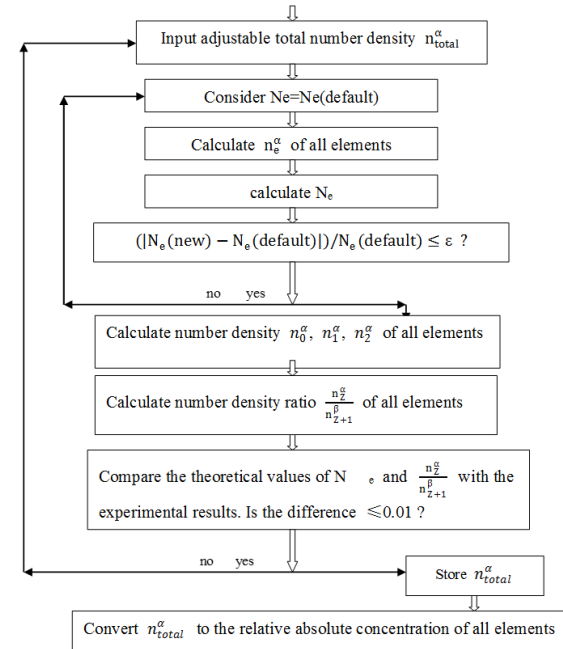
1. Quantitative analysis of liquid matrix by DP-LIBS



| Elements | LoD (ppm) | |
|----------|-----------|---------------|
| | SP-LIBS | DP-LIBS |
| Cr | 0.427 | 0.207 |
| Cd | 41.231 | 14.768 |
| Fe | 4.155 | 2.005 |
| Ca | 0.018 | 0.008 |
| Al | 0.530 | 0.186 |
| Mn | 0.682 | 0.308 |
| Pb | 6.056 | 2.573 |

The LoD values were improved 2~3 times by DP-LIBS

2. Quantitative analysis liquid matrix by improved CF-LIBS



The improved CF-LIBS

| Element s | Preparation concentration (ppm) | Prediction concentration (ppm) | RE(%) |
|-----------|---------------------------------|--------------------------------|-------------|
| Cr | 200 | 198.87 | 0.57 |
| Pb | 500 | 496.90 | 0.62 |
| Cd | 3000 | 2995.31 | 0.16 |
| Ca | 50 | 49.61 | 0.78 |
| Al | 100 | 99.46 | 0.54 |
| Co | 1000 | 997.82 | 0.22 |
| Mn | 200 | 198.8 | 0.58 |

The RE values < 1%