# Exp4_ontology_test

**Date:** 2024-08-02
**Status:** Success
**Created by:** Manuel Vollbrecht

## Title:

| | |
|---|---|
| Date of experiment: | 25.05.2024 |
| Experimenter: | Keno Krieger |
| Assistant: | |
| **Goal of Experiment:** | |

| **Flame 1 (front) - precursors** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Element | Precursor (Metal) | Precursor provider (metal) | Precursor LOT number (metal) | Precursor (solvent) | Precursor provider (solvent) | Precursor LOT number (solvent) | used volume of precursor solution [ml] | precursor molarity [M] | notes: |
| exp4 | Si | Tetraethyl orthosilicate | Sigma Aldrich | DIWEGN | xylene | VWR | CCCCCC | 50 | 0.3 | |
| | Ca | Ca naphthenate | Strem | EDFGBS | xylene | VWR | CCCCCC | 25 | 0.3 | |
| | Mg | Mg naphthenate | Strem | ÖKJBFG | xylene | VWR | CCCCCC | 25 | 0.3 | |

| Flame 1 (front) - gas and dispersion parameters | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | precursor feed rate [ml/min] | dispersion gas (type) | dispersion gas purity | dispersion gas flow rate [l/min] | fuel gas (type) | fuel gas purity | fuel gas flow rate [l/min] | $O_2$ gas purity (pilot flame) | $O_2$ flow rate [l/min] (pilot flame) | sheath gas (type) | sheath gas purity | sheath gas flow rate [l/min] | notes: |
| exp4 | 5 | oxygen | 5.0 | 5 | methane | 3.5 | 1.5 | 5.0 | 3.2 | | | | |

| Flame 1 (front) - reactor set-up | | | | | | |
|---|---|---|---|---|---|---|
| Sample ID | Nozzle type (e.g. Tethis) | nozzle-filter distance [cm] | nozzle angle [°] | pressure drop at nozzle [bar] | final pressure drop [mbar] | notes: |
| exp4 | Tethis | 60 | 0 | 1.5 | 160 | |

| Flame 2 (back) - precursors | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Element | Precursor (Metal) | Precursor provider (metal) | Precursor LOT number (metal) | Precursor (solvent) | Precursor provider (solvent) | Precursor LOT number (solvent) | mass of metal precursor [g] | total volume of precursor solution [ml] | precursor molarity [M] | notes: |

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| Flame 2 (back) - gas and dispersion parameters | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | precursor feed rate [ml/min] | dispersion gas (type) | dispersion gas purity | dispersion gas flow rate [l/min] | fuel gas (type) | fuel gas purity | fuel gas flow rate [l/min] | $O_2$ gas purity (pilot flame) | $O_2$ flow rate [l/min] (pilot flame) | sheath gas (type) | sheath gas purity | sheath gas flow rate [l/min] | notes: |
| | | | | | | | | | | | | | |

| Flame 2 (Back) - reactor set-up | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sample ID | nozzle type (e.g. Tethis) | nozzle-filter distance [cm] | horizontal nozzle distance [cm] | nozzle angle [°] | pressure drop at nozzle [bar] | final pressure drop [mbar] | notes: |
| | | | | | | | |

| Results | | | | |
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| Sample ID | empty filter [g] | covered filter [g] | sieving grid [µm] | Product after sieving [mg] |
| exp4 | 4.95 | 5.52 | 125 | 432 |

## Notes/observations:

Unique eLabID: 20240802-c28d2acffc9df4d9ec39b43c5c9f36bdd078e628
Link: https://elabftw.iwt.zz/experiments.php?mode=view&id=2442