## Supporting Information

# An integrated hot-stage microscope-Direct Analysis in Real-Time-mass spectrometry system for studying the thermal behavior of materials Supporting information 

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Figure S1: Structures of PDMS oligomers of repeating unit $\left[\mathrm{Si}(\mathrm{Me})_{2} \mathrm{O}\right]_{n}$, where $\mathrm{n}=$ 9 to 12


Figure S2: Typical mass spectrum of a PDMS sample showing [ $\mathrm{M}+\mathrm{H}]^{+}$and [ $\left.\mathrm{M}+\mathrm{NH}_{4}\right]^{+}$ion series


Figure S3: Micrographs of a mixture of 2-hydroxy-1,4-naphthoquinone, 2hydroxybenzoic acid and anthracene-9,10-dione, showing crystal formation during heating to $300^{\circ} \mathrm{C}$


Molecular Formula: $\mathrm{C}_{7} \mathrm{H}_{6} \mathrm{O}$
Molecular Formula: $\mathrm{C}_{7} \mathrm{H}_{9} \mathrm{NO}$
Molecular Formula: $\mathrm{C}_{7} \mathrm{H}_{9} \mathrm{NO}$



Scheme S1. Reaction scheme for formation of hydrobenzamide from benzaldehyde in the presence of ammonia

