

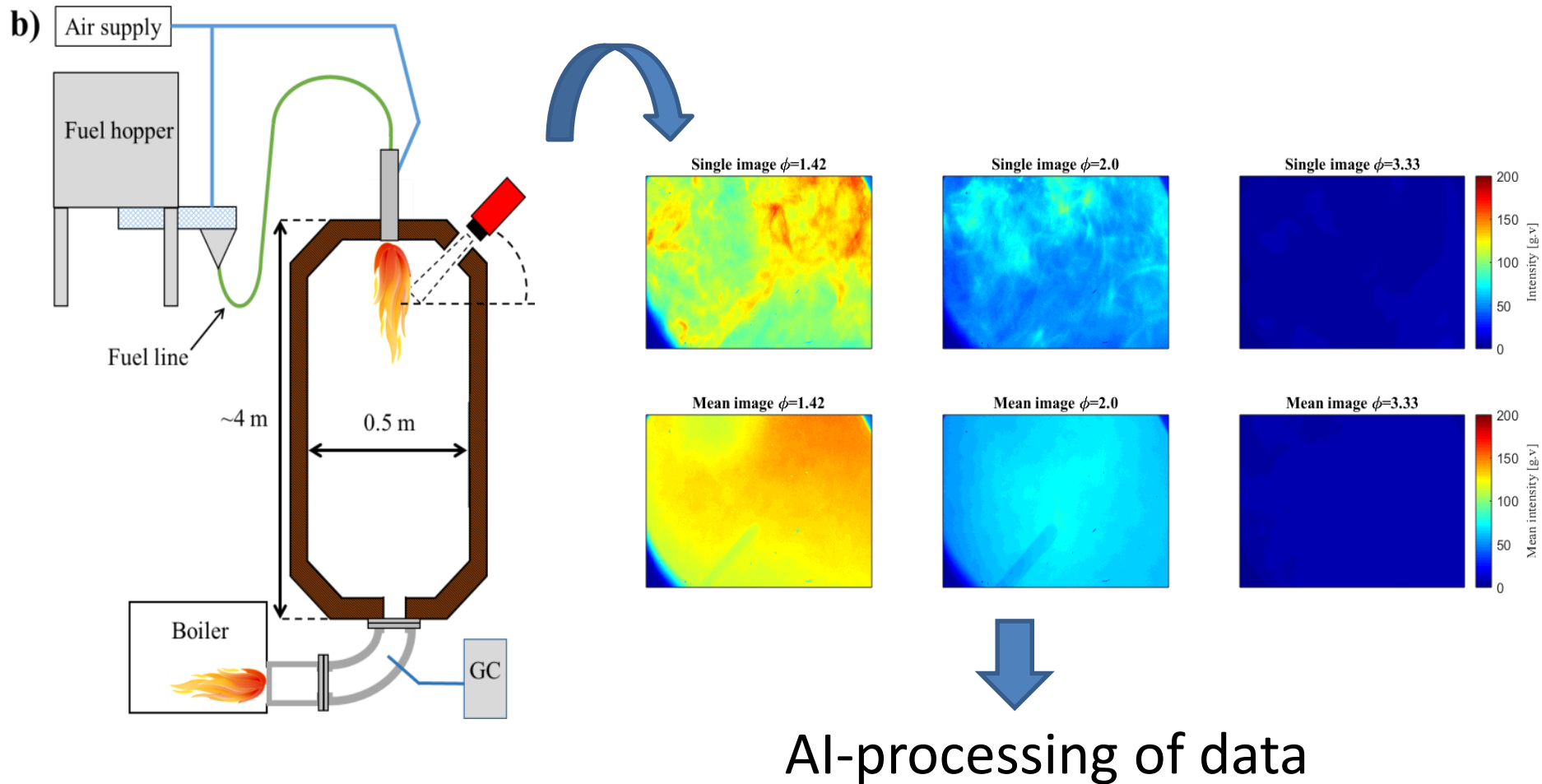
Camera and laser based diagnostics relevant for entrained flow gasifiers

Yngve Ögren
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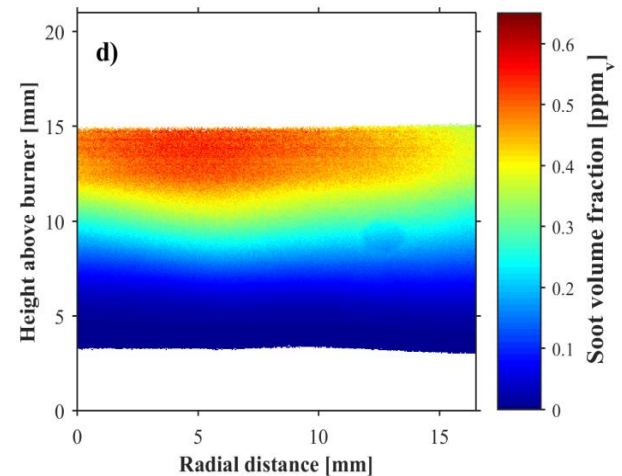
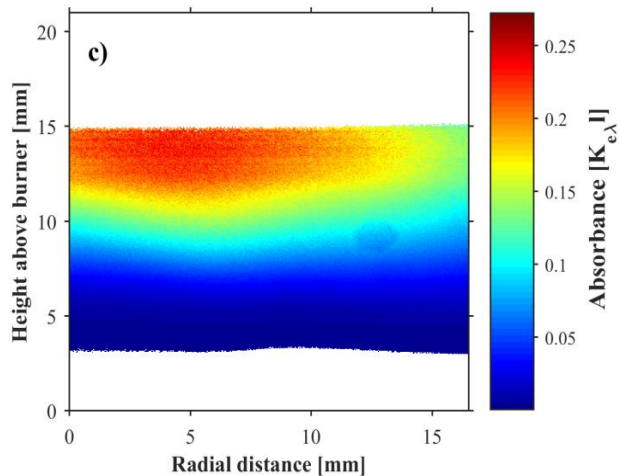
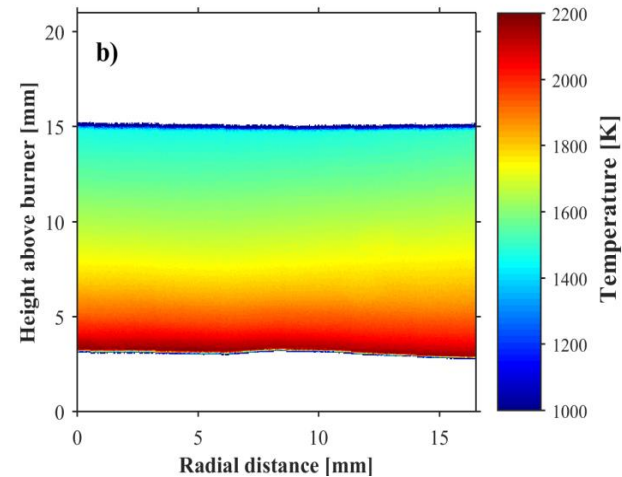
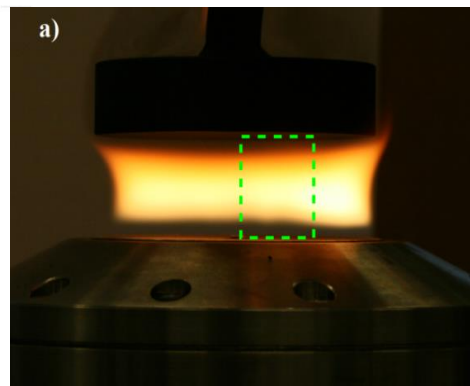
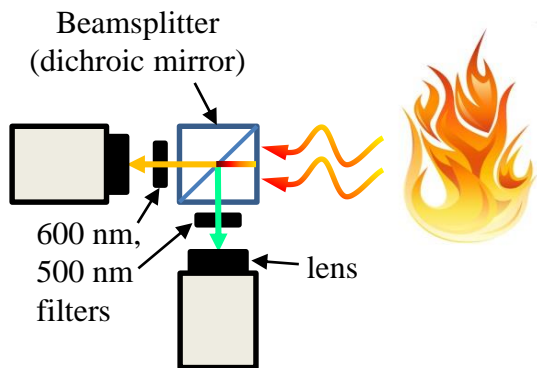
Introduction

- Gasification – (Production of carbon neutral fuels)
- Process control – (Temperature, Gas composition, flame extinguishing, ash issues)
- Conventional methods – (Thermocouples, Impactor, GC)
- Non-intrusive methods (Cameras and Laser-based methods)

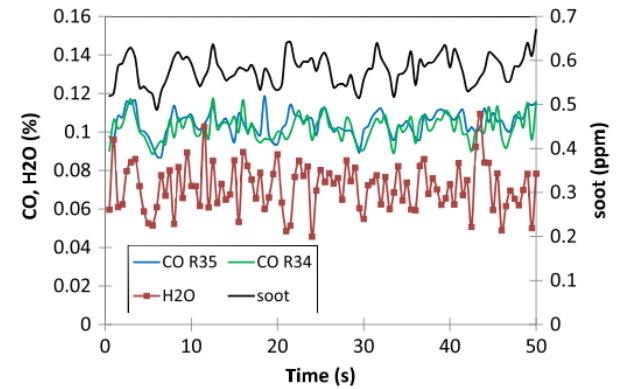
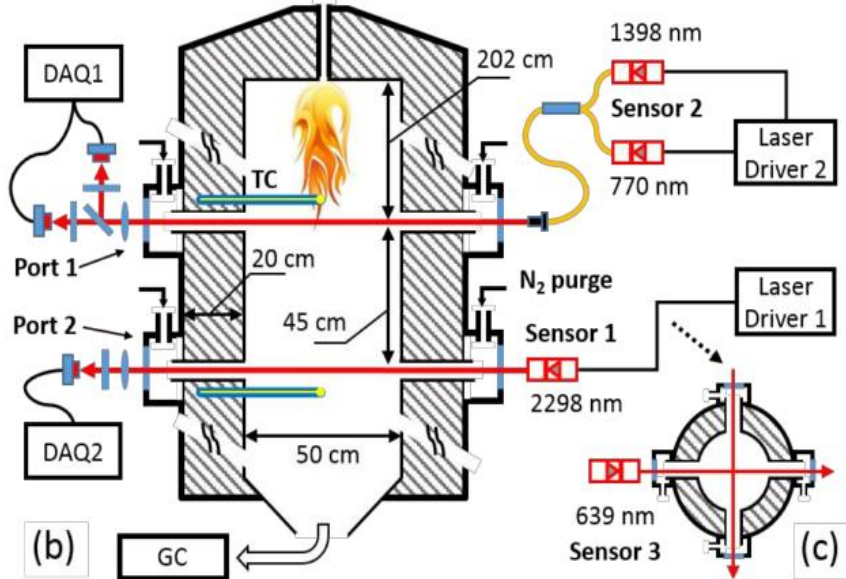
CCD camera application to the gasifier



Two color pyrometry



Application of TDLAS



Thanks for listening!