

# Modifications in physicochemical properties of wood combustion aerosols due to chemical aging



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### OBJECTIVES

1. Chemical and physical characterization of wood combustion aerosol;
2. Investigation of changes in physicochemical properties after chemical aging.

### FUEL TYPES AND APPLIANCES

Wood	Appliances
Spruce log	Classical/down draught stove
Beech log	Classical/down draught stove
Wood Pellet	Pellet oven firing

**Spruce and beech**

**Wood pellet**

**"Classical" fireplace**

**"Down draught" fireplace**

**Pellet system**

Origin of photo material: Martin Kaltschmitt, Hans Hartmann, Hermann Hofbauer, Energie aus Biomasse Grundlagen, Techniken und Verfahren, 2. neu bearbeitete und erweiterte Auflage, Springer-Verlag Berlin Heidelberg 2001, 2009, S. 470, S. 498

### SAMPLING SYSTEM

1. Tunnel experiments
2. Aging experiments
  - Nighttime chemistry: Ozone
  - Daytime chemistry: UV-lights

