

# CHEMISTRY

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### Concepts

Family Business: Multiple Members of Major Phytohormone  
Classes Orchestrate Plant Stress Responses

M. Erb and G. Glauser

On the Design of Fluorescent Ratiometric Nanosensors

T. Doussineau, G. J. Mohr et al.

 WILEY-VCH

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... Starting from 2-methylnaphthalene or 2,3,6-trimethylphenol, vitamin K<sub>3</sub> or the vitamin E precursor, 2,3,5-trimethyl-*p*-benzoquinone, can be easily synthesized by using an in situ iron catalyst with hydrogen peroxide as the terminal oxidant. The temperature and the amine ligand control the outcome of the reaction. The selective oxidation of 2-methylnaphthalene and 2,3,6-trimethylphenol takes place in 55 and 79% yield, respectively. For more details, see the Communication by M. Beller et al. on page 10300 ff.

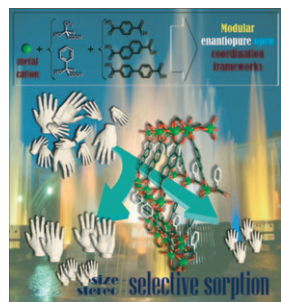
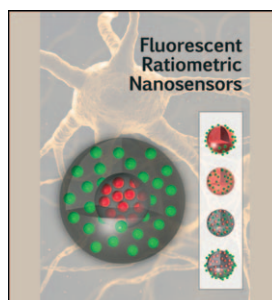


## Plant Behavior

In their Concept article on page 10280 ff., M. Erb and G. Glauser discuss hormone families as a way to understand plant behavior. A diversity of metabolites related to the different “classical phytohormones” play a role in plant defence and plant–environment interactions and may be best described in terms of hormone families. Amino acid conjugation, hydroxylation, methylation, and glucosylation, in particular, are prominent biochemical processes that diversify the metabolic arsenal of plant stress responses.

## Fluorescent Nanosensors

Fluorescent indicator dyes can be attached to nanoparticles of various compositions and architectures to produce ratiometric nanosensors. In their Concept article on page 10290 ff., T. Doussineau et al. describe some concepts and methodologies that rule the preparation of these powerful bioanalytical tools for probing biosamples.



## Coordination Polymers

In their Full Paper on page 10348 ff., V. P. Fedin et al. describe the synthesis of two isorecticular, homochiral, porous metal–organic coordination polymers that share the same topological features as the previously reported zinc(II) terephthalate lactate framework, but have larger pores and opposite absolute configuration of the chiral centers. This leads to new sorption and catalytic properties.

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