

BULLETIN DU GROUPEMENT  
d'informations mutuelles



SE CONNAÎTRE, S'ENTENDRE, S'ENTRAIDER

July to September 2018

No. 272

Office: ETH Zürich, Laboratory of Physical Chemistry  
8093 Zürich, Switzerland, [www.ampere-society.org](http://www.ampere-society.org)

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Publisher: Matthias Ernst, ETH Zurich, Switzerland

## Editorial

Dear members of Groupement AMPERE, this new edition of the „AMPERE Bulletin“ brings about some changes in the AMPERE Bureau. At the EUROMAR 2018 in Nantes, I was elected as Secretary General and Sebastian Hiller as Executive Secretary of AMPERE. I would like to express my thanks (see also page 4) to Gunnar Jeschke who has run the day-to-day business of AMPERE during the past 12 years. It was always a pleasure to work with him and I hope that I will manage to organize the Groupement AMPERE as smoothly as he has. I am very grateful to the people running the back office (Kristina Comiotto) and the web page (Rene Tschaggelar) that they will continue to work with me in the AMPERE office in Zurich. I am sure that this will make the transition a lot smoother.

The articles in this edition of the Bulletin illustrate again the wide range of educational activities that are organized under the name of the Groupement AMPERE: The AMPERE NMR school in Zakopane has since many years been an important meeting to teach students the basics of NMR and at the same time expose them to the latest developments in all areas of NMR. The series of Spinus School-Conferences has been organized for many years but only recently under the umbrella of the AMPERE society. These schools and all the other schools are very important for the education of new students in the field of magnetic resonance. Organizing such schools, finding good teachers, and giving educational talks is a lot of work that is often not fully recognized.

Since last year, AMPERE has implemented financial support for conferences organized by the subdivisions on a competitive basis. All conference organizers are encouraged to apply for support for students or special lectures or other creative new ideas. Short proposals for 2019 (max. two pages) should be sent to the head of the AMPERE Prize Committee (Beat Meier, Email: [beme@ethz.ch](mailto:beme@ethz.ch)) before December 31<sup>st</sup>, 2018. For more details see the webpage at: [ampere-society.org](http://ampere-society.org) (for organizers). I wish all of you an enjoyable rest of the summer and fall and a good start into the fall semester.

*Matthias Ernst*

Matthias Ernst  
Secretary General, Groupement AMPERE

### Third Poster Award, Ampere NMR School 2018 Dmitry S. Zasukhin, Lomonosov Moscow State University

#### Zeolite Y Crystallization: *in situ* MAS NMR Study

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Zeolite Y is a well-known catalyst widely used in industrial processes such as cracking of heavy oil fractions. The improvement of existing synthetic procedures and rational design of novel ones require the profound understanding of the mechanism of zeolite Y formation. This information can be best obtained by spectroscopic *in situ* techniques, among which MAS NMR is one of the most informative, since it can follow the fate of various nuclei both in solution and in solid state.

*In situ* studies of zeolite Y crystallization were carried out at 70°C in special NMR autoclave cell <sup>[1]</sup> placed into 7 mm ZrO<sub>2</sub> MAS-rotor and rotated at 5 kHz. During the experiment the <sup>1</sup>H, <sup>23</sup>Na, <sup>27</sup>Al and <sup>29</sup>Si MAS NMR spectra were continuously recorded.

<sup>27</sup>Al MAS NMR and <sup>29</sup>Si CP/MAS NMR (Fig. 1) allowed monitoring gradual transformation of amorphous aluminosilicate phase into crystalline zeolite Y. At the same time, no changes in <sup>29</sup>Si DP/MAS NMR were observed. Based on the spectroscopic data obtained, the mechanism of zeolite Y crystallization was attributed to solid-solid rearrangement within the solid phase of the gel.

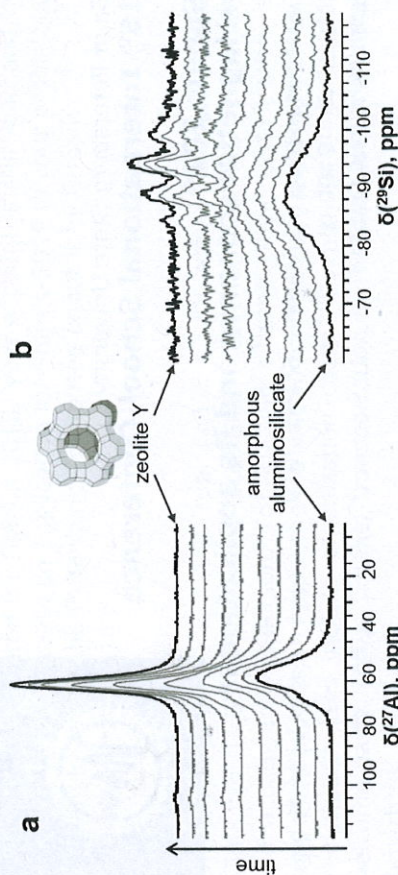


Figure 1. <sup>27</sup>Al MAS NMR (a) and <sup>29</sup>Si CP/MAS NMR (b) spectra obtained during *in situ* study of zeolite Y crystallization.

#### Acknowledgements

The authors thank the Russian Science Foundation for the financial support (grant №14-23-00094). A.V.Y. gratefully acknowledges Haldor Topsøe A/S for PhD fellowship.

#### References

- [1] I. I. Ivanova, Y. G. Kolyagin, I. A. Kasyanov, A. V. Yakimov, T. O. Bok, D. N. Zarubin. *Angew. Chem. Int. Ed.* 2017, 56, 15344 –15347.