



SDI Review Form 1.6

Journal Name:	International Research Journal of Pure and Applied Chemistry
Manuscript Number:	2014_IRJPAC_10212
Title of the Manuscript:	Cation-Type Dependences of ^1H and ^{29}Si MAS NMR Chemical Shifts and Desorption Temperatures of Water Molecules in Faujasite-Type Zeolites
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	1- The manuscript needs serious editing regarding the use of English and also for combined words that have to be written separately (starting from the title ...H and...). 2- It would be good to give the exact compositions of the reaction mixtures used to prepare the zeolites so that other people can also reproduce the results. 3- KOH was used in the preparation of sample A. In general, NaOH is used to prepare zeolites in sodium form. What was the effect of using KOH in this case? Did the zeolite contain any K after synthesis? Additionally, how much of Na was exchanged by the different ions after the ion-exchange process in each case? 4- In the adsorption isotherms depicted in Fig. 3, the isotherm of the sample degassed for 5 h looks different than the others, especially at the higher relative pressures. Actually, it would be good to calculate the total and external areas of the different samples and present them in a table. It is also difficult to observe the capacities from the figures. 5- It is also difficult to follow the TG curves in Fig. 6. What is the mass of the samples since the mass loss is given in mg? The mass loss can be given as percentages in a table. 6- What is meant by complex dependencies observed for cation types? What parameter is	1. I'm sorry. I cannot understand why many spaces between words were deleted in the draft. I inserted appropriate spaces in the 2nd revision. 2. Thank you for your advice. I added more information of mass and concentration in the 2nd revision. 3. In the previous report [37], KOH and NaOH are employed. We also suspected that K ions are in Na-FAU. So, we performed Na exchange by NaCl solution. 23Na NMR measurements showed that ca. 100(Li), 100(Na), ca. 100(K), ca. 60(Rb), and ca. 60 % (Cs) of Na ions were exchanged in this study. The low ratios can be explained that Na ions in sodalites cannot be exchanged by Rb and Cs ions. 4. We need informations about micro pore. Therefore, values at the lower relative pressure are important in this study. 5. Thank you for your advice. We redraw the figures. 6. The ion size is key factor. Water molecules can link to the large parts of large ions on super cages of FAUs.



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	taken as a basis for this, the ion size or something else?	
<u>Minor</u> REVISION comments	1- On p. 6, what do you mean by silicon lubber? Is it silicon rubber? 2- In Table 1, for the sample with Si/Al=1 and exchanged with K, is there a mistake with the value given since it is lower than expected? 3- In Fig. 9, it has not been specified which figure corresponds to which ion.	1. I mistook "silicon rubber". Thank you. 2. Thank you very much. 3. I'm sorry. Titles are sifted to another place in the text. I moved the appropriated place.
<u>Optional/General</u> comments		