

Chemical reactions in the $\text{Fe}_2\text{SiO}_4\text{-D}_2$ system with a variable deuterium content under a pressure of 7.5 GPa

Vadim S. Efimchenko^{a*}, Nicolay V. Barkovskii^a, Vladimir K. Fedotov^a,
Konstantin P. Meletov^a and Artem V. Prokoshin^{a,b}

*^aInstitute of Solid State Physics RAS, 142432 Chernogolovka, Moscow District,
Russia*

^bLomonosov Moscow State University, Leninskie Gory, Moscow, 119991, Russia

*Corresponding Author: Vadim S. Efimchenko

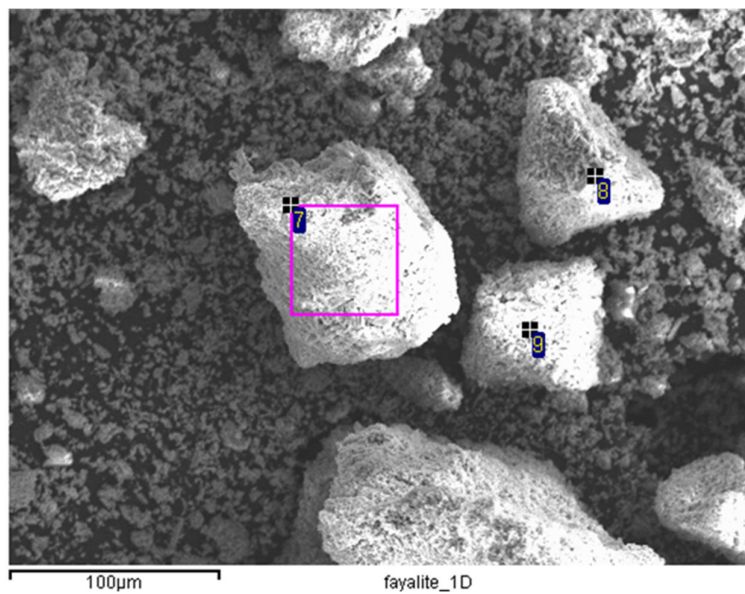
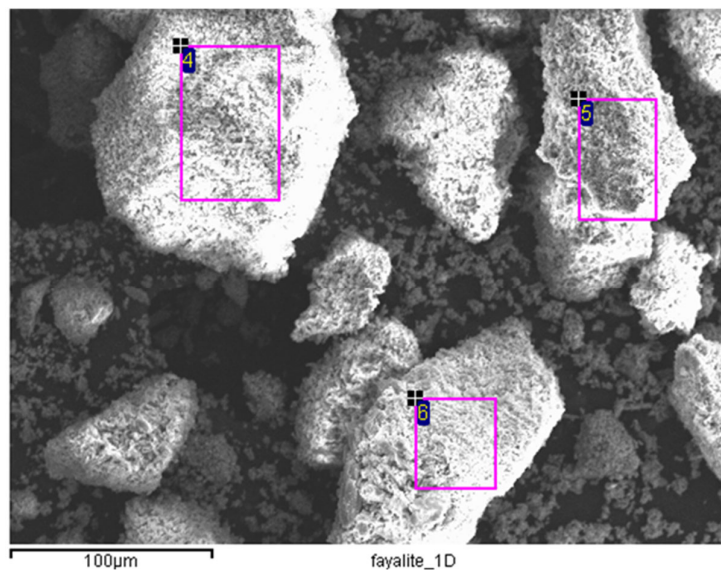
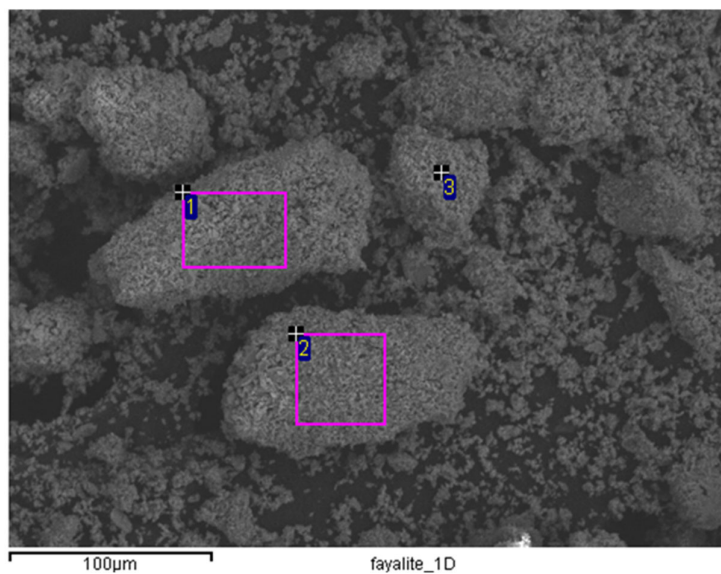
Phone number: +7(496)52 284-10

E-mail address: efimchen@issp.ac.ru

Full postal address: Institute of Solid State Physics Russian Academy of Sciences

Chernogolovka, Moscow District, 2 Academician Ossipyan str., 142432 Russia

Electron images of the initial fayalite sample and for the sample deuterated at $P = 7.5$ GPa and $T = 280$ °C and the initial molar ratio $D_2/Fe_2SiO_4=1$. The images were obtained on a Supra 50VP scanning electron microscope.



The total composition of the sample deuterated at P=7.5 GPa and T=280 °C with the initial molar ratio $D_2/Fe_2SiO_4=1$ and examined by EDX. The data in the Table are averaged over the areas and points marked on the SEM Figures.

Processing option : All elements analysed (Normalised)

Spectrum	C	O	Al	Si	Fe
1	4.60	57.49		16.21	21.69
2		53.45		16.62	29.93
3		35.14		12.65	52.21
4	3.54	57.45		16.22	22.79
5	5.43	55.00		14.94	24.63
6	7.28	38.68		12.95	41.08
7	6.57	59.84		15.23	18.35
8	11.23	24.34		9.33	55.11
9		15.44	1.89	4.02	78.65

All results in atomic%