

Enhanced Conductivity in Mo- and W-Doped $\text{Bi}_4\text{Nd}_6\text{O}_{15}$ -Type Structure Compounds

Ekaterina I. Orlova^{a*}, Egor D. Baldin^b, Elena P. Kharitonova^a, Nikolay V. Lyskov^c, Vasilii O. Yapaskurt^d, Valentina I. Voronkova^a

^a*Lomonosov Moscow State University, Faculty of Physics, GSP-1, Leninskie Gory, Moscow, 119991, Russian Federation.*

^b*N.N. Semenov Federal Research Center For Chemical Physics RAS, Kosygina 4, Moscow, 119991, Russian Federation.*

^c*Federal Research Center for Problems of Chemical Physics and Medical Chemistry of the Russian Academy of Sciences, Acad. Semenov av. 1, Chernogolovka, 142432, Russian Federation.*

^d*Lomonosov Moscow State University, Department of Geology, GSP-1, Leninskie Gory, Moscow, 119991, Russian Federation.*

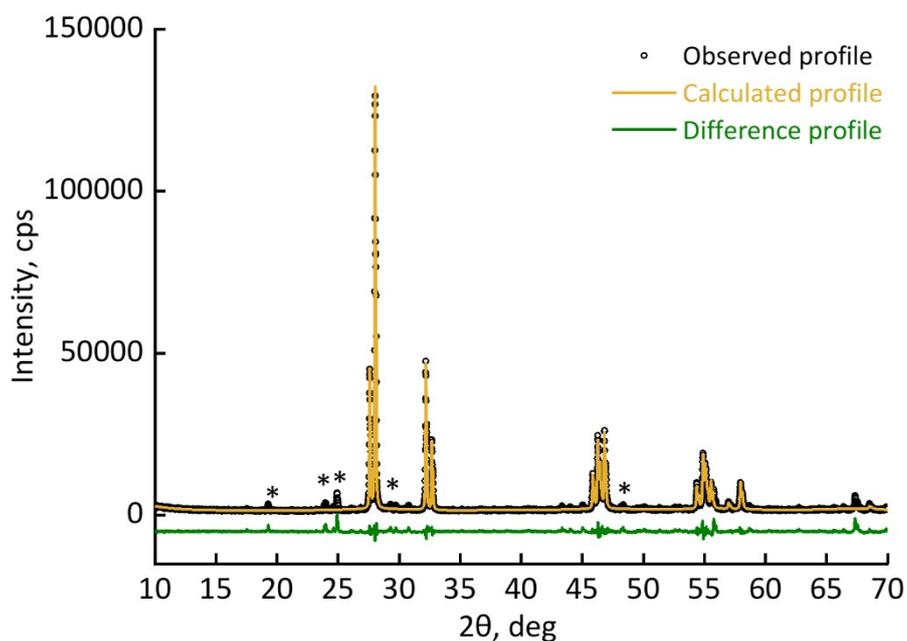


Fig. S1. Le Bail refinement plot for the BNO-I sample: observed, calculated, and difference profiles. Asterisks (*) mark unindexed superstructure reflections.

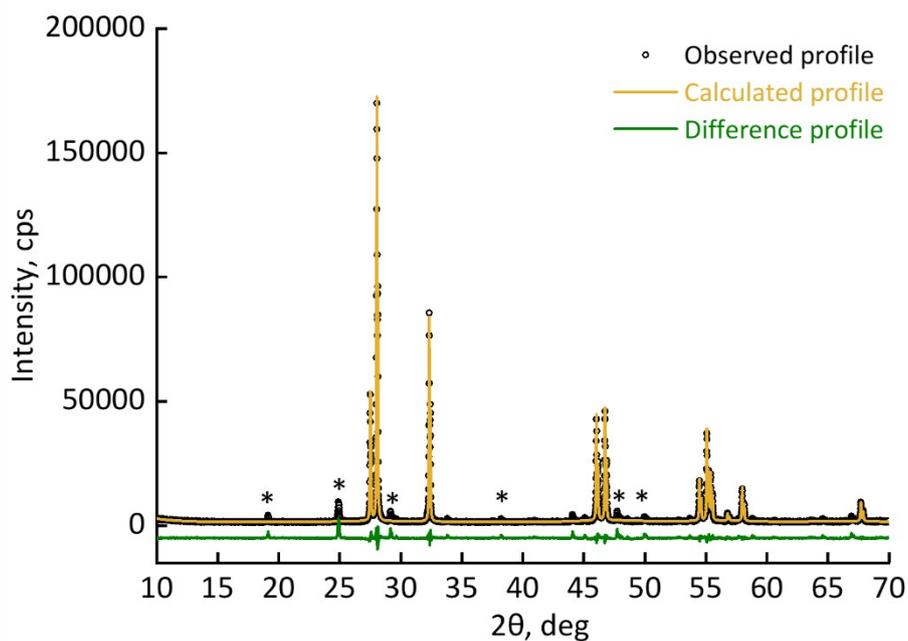


Fig. S2. Le Bail refinement plot for the BNO-II sample: observed, calculated, and difference profiles. Asterisks (*) mark unindexed superstructure reflections.

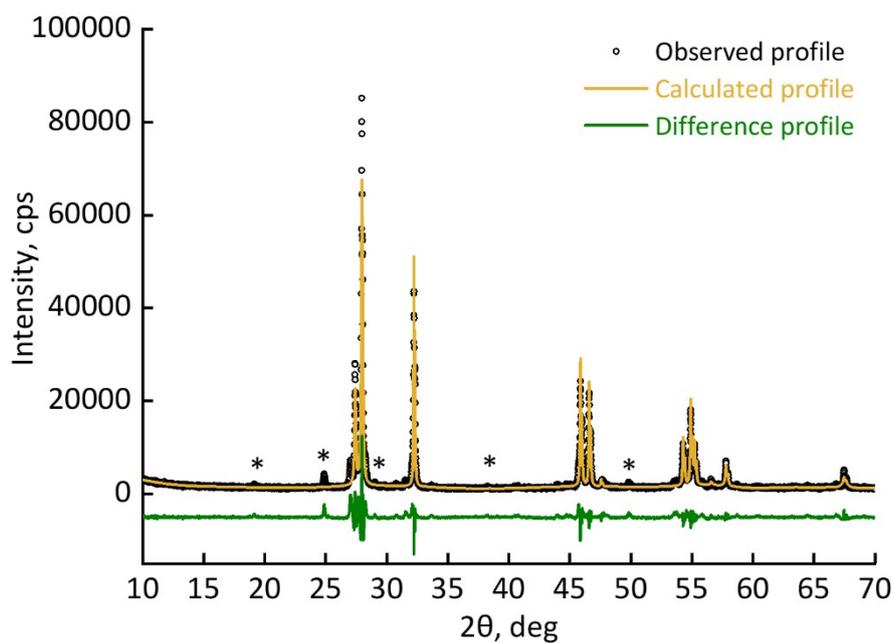


Fig. S3. Le Bail refinement plot for the BNMO sample: observed, calculated, and difference profiles. Asterisks (*) mark unindexed superstructure reflections.

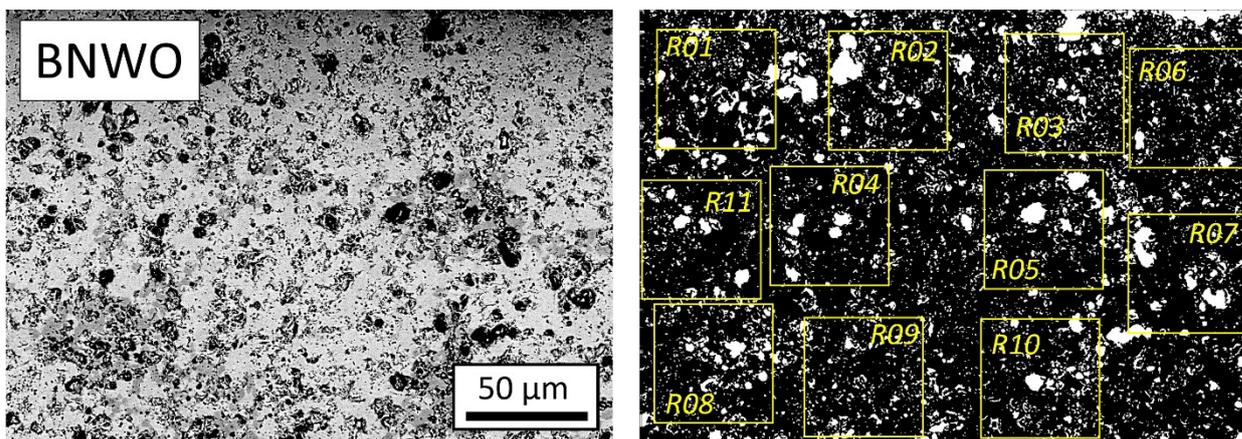


Fig.S4. Representative SEM micrograph used for porosity analysis of the BNWO ceramic (left panel) and its corresponding binary image with the eleven analyzed regions outlined (right panel). The non-overlapping square regions (R01–R11) each have an area of 2500 μm^2 . Their individual porosity values are listed in Supplementary Table S1.

Table S1. Results of local porosity measurements for the BNWO sample.

Region*	Pore Count	Porosity (%)
R01	58	8.1
R02	55	10.6
R03	73	9.7
R04	45	8.6
R05	54	10.2
R06	47	5.7
R07	34	7.9
R08	68	11.9
R09	61	6.8
R10	59	9.6
R11	45	8.3

Region*	Pore Count	Porosity (%)
Mean \pm SD	54.5 \pm 11.2	8.6 \pm 1.8

* Regions R01–R11 correspond to the areas outlined in Supplementary Fig. S4. Each region has an area of 2500 μm^2 and was analyzed on the same binary image. The coefficient of variation (CV) for the porosity is 21%.