

inc 2014 me

VIII International Conference
on Mechanochemistry and Mechanical Alloying

Krakow, Poland, June 22-26, 2014

Book of Abstracts



SYNTHESIS OF SILVER HALIDES BY MECHANOCHEMICAL ROUTE

PII-29

B. Tatykaev⁽¹⁾, F.Kh. Urakaev⁽²⁾, B. Uralbekov⁽¹⁾, M. Burkitbayev⁽¹⁾

(1) Al-Farabi Kazakh National University, Almaty, Kazakhstan

(2) Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia

Silver halides are used in a various fields of science and techniques. Several methods have been used such as a gel techniques, in situ synthesis, microemulsion method and liquid crystalline phase reaction to prepare silver chloride particles. In this study, the focus is put on its preparation owing to mechanical activation (MA).

The reagent used in this study were analytical pure of AgNO_3 , NH_4Cl and NH_4NO_3 . Milling was carried out in planetary ball mill (Retsch PM 400).

The structure and morphology of the powder was studied with D8 ADVANCE (Bruker AXS) X-ray powder diffractometer with CuK_α radiation and FEI QUANTA 3D dual beam SEM.

The XRD and SEM results showed the formation of silver chloride particles with size less than 200 nm. The formed particles diameter lay in the range 100-200 nm during the milling process. Kinetic studies showed that the particle size of AgCl decreases till 100 nm with increasing milling time up to 20 min. The intermediate compound of $\text{NH}_4\text{Ag}(\text{NO}_3)_2$ were recorded during MA of the studied system.



inc 2014 me

This is to confirm that:

Batukhan Tatykayev

attended

**VIII International Conference
on Mechanochemistry
and Mechanical Alloying
INCOME 2014**

22-26.06.2014, Krakow

Krystyna Wieczorek-Ciurowa and Dariusz Oleszak
Chairmen of the Organizing Committee



Cracow University
of Technology



FACULTY OF MATERIALS
SCIENCE AND ENGINEERING