

*Study of Ionic mixed crystals with X-ray Diffraction and SEM*

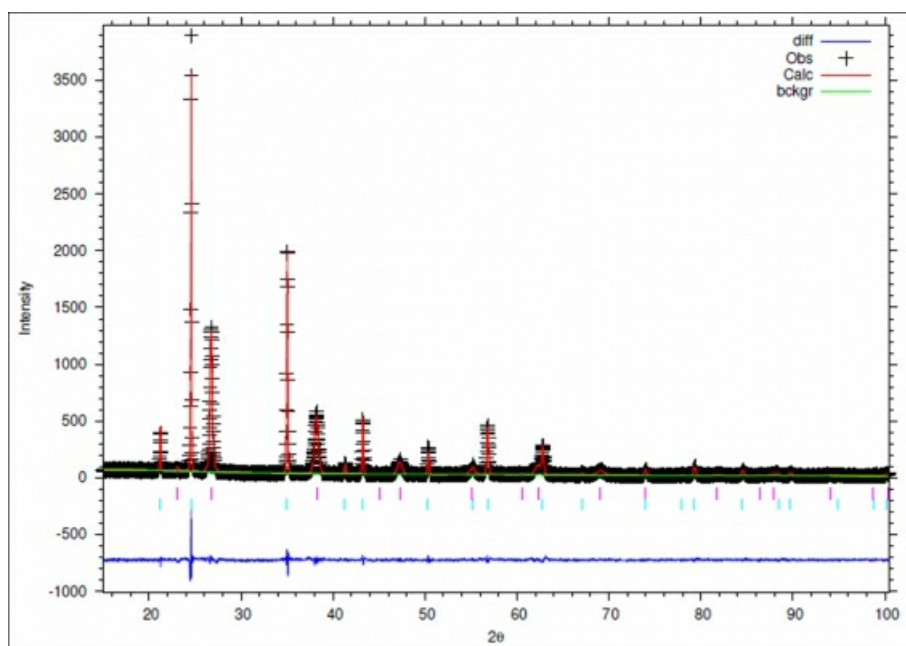
Ricardo-Antonio Rodríguez-Mijangos<sup>1</sup>

<sup>1</sup>Departamento De Investigación En Física Universidad De Sonora, Hermosillo, Mexico

E-mail: mijangos@cifus.uson.mx

The alkali halide ionic crystals with the chemical formula AH, where A is an alkali metal (Li, Na, K, Rb, Cs) and H is a halogen (F, Cl, Br, I), can form solid solutions by substitution between the alkali metals, the halogens or both. Solid solutions are widely studied with the aim to understand the phase selection during solidification. The objective of the present work is to determine the phases present in the final microstructure of a crystalline material obtained from the melt of five alkali halide salts in the range of high ionic radii. (two chlorures, two bromures an one iodure). The samples was growing by the Czochralsky technique and studied with powder X ray diffraction and scanning electron microscopy. The phases was obtained. Is showed the powder diffraction diffratogram.

Acknowledgement: I appreciate of technical support of E Alvarez-Ramos and J. Hernandez-Paredes of the Ph. D. program of Nanotechnology of the Departamento de Física of Universidad de Sonora.



**Keywords:** [crystal engineering](#), [ionic mixtures](#), [X ray powder diffraction](#)