

Dedication

My warm dedications are to my family (a wife and four kids). They represent the drive in my life. Also I dedicate this research to my parents who represent the hope in my life.

Acknowledgements

I would like to express my gratitude to my supervisor Dr. Mohamed Hassan Eisa, who guided my research. He always had time to listen to my ideas and to discuss me at any time. I owe special thanks to Dr. Ibrahim Elfaki for opening his office to us. Also I thank Hadiya for her. I thank my close friend Haitham Fathi. The warm thanks to all people, who encouraged me.

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Abstract [in English]

The energy loss had been studied in the situation of heavy ions at high velocity. The first chapter discusses the heavy ions, ion channeling, stopping powers high velocity and fluctuation. The second chapter had been about the formulas that discuss the energy loss classically and quantum mechanically. The third chapter had been about other topics that related to the energy loss such as Lindhard treatment, Barkas correction and high- Z material. In chapter four other important that related to the energy loss which had been the effect of dynamic screening, cross section, ion potential and the impact parameter. The last chapter gives the discussion and the calculations.

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