



## CHAPTER V CONCLUSIONS

LLDPE melt flow property (MFI) is altered by the addition of NR or ENR resulting in lower MFI or flow retardation, especially with ENR. Moreover, the effect of NR addition in binary blends is to reduce molecular orientation resulting in lower crystallinity and lower yield stress so that materials become more flexible with higher  $T_m$  and higher  $O_2$  permeability. UV absorption also shifts to visible absorption.

For pure LLDPE increased orientation occurs with increasing DR resulting in higher crystallinity, lower permeability, and lower UV absorption and a shift to lower wavelength. Effect of orientation in binary blends with NR shows less increment, limited orientation, lower crystallinities and higher yield strength. They do not affect  $T_m$  although orientation increases with DR but the blended film shows higher gas permeability, with absorption shifting to shorter UV wavelength and lower absorption. The reactive blends have slight change in orientation with DR as well as the lowest crystallinity and the lowest yield stress. This results in high permeability and lower UV-Vis absorption with increasing DR.