Industrial Chemistry
ISSN: 2469-9764

Dubey et al., Ind Chem 2016, 2:3
DOI: 10.4172/2469-9764.1000121

Research Article

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Ke ords: N - ; ; FTIR; DSC; MA- -PE

Introd ction

[illegible]

[illegible]

[illegible]

[illegible]

15 2.5 2. B U (M -Q-L QU /S) ASTM D-5208: O F L A U 0.66 2 8 8 C 144

Weight loss

P LLDPE/ LDPE/ PLA/MA- -PE :

1%, 10.8 11.4, L 8%, 21.74 29.7 96 U (T 4). T U F L U

FTIR

F 4 C LLDPE/LDPE / PLA/MA- -PE LLDPE/LDPE /PLA/MA- -PE/ U ( ) T 5. C L 1190-1090 $^{-1}$ (O-C=O) L C F 4 96 U C 2901 $^{-1}$ 2915 $^{-1}$ (C-H), 1756-1744

Citation: Dubey P, Mathur S, Chand N, Upadhyaya P (2016) Role of Nano Zirconia Addition on Photodegradation of LLDPE/LDPE/PLA Blend Films. Ind Chem 2: 121. doi: 10.4172/2469-9764.1000121

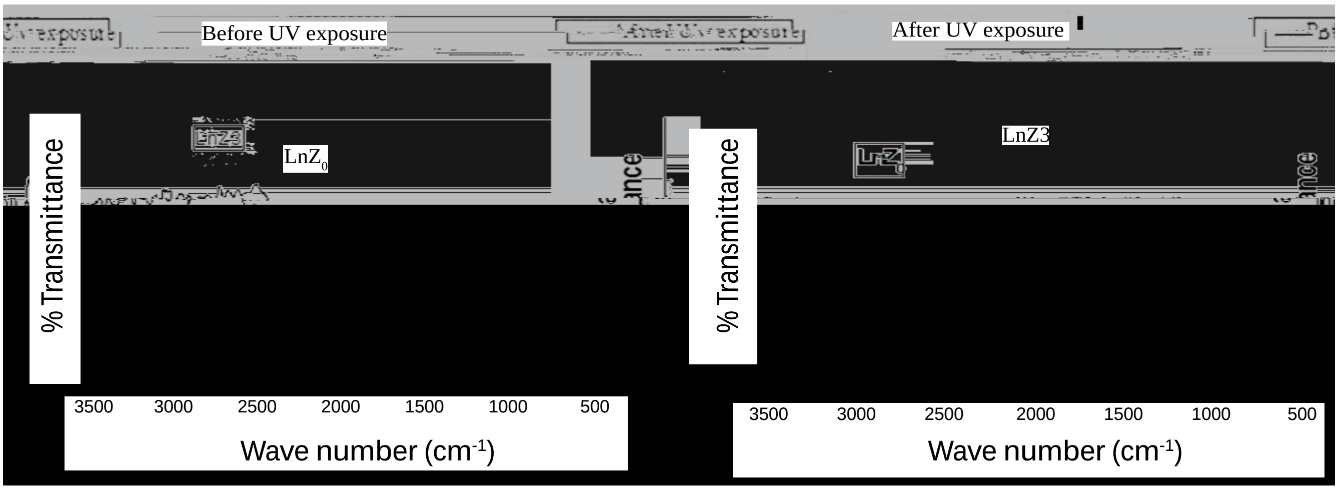

Figure 4: FTIR of LnZ_0 and LnZ_3 before and after 96 hrs. UV exposure.

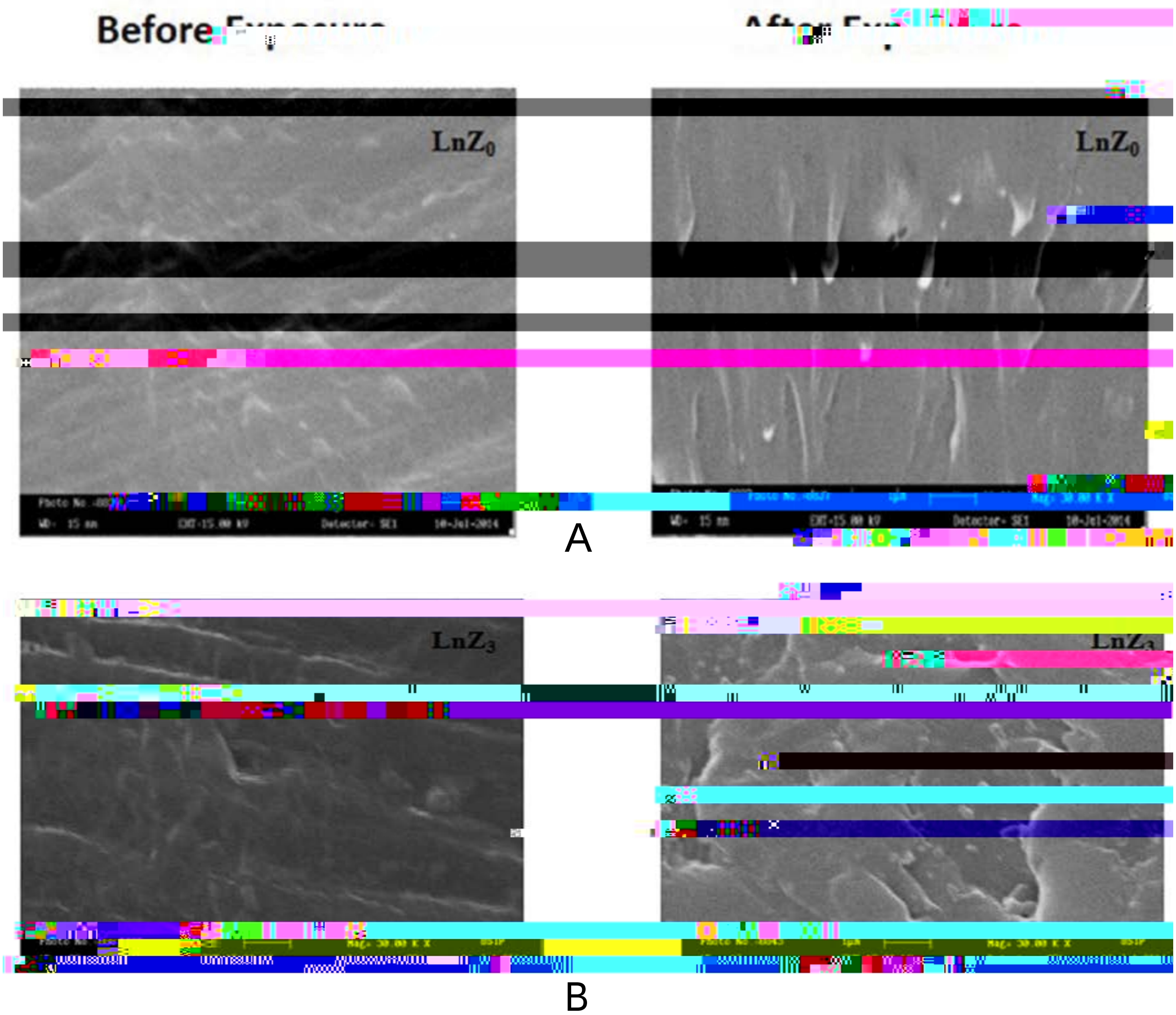

Figure 5: SEM images **A)** LnZ_0 before and after 96 hrs. UV exposure and **B)** LnZ_3 before and after 96 hrs. UV exposure.

LLDPE/LDPE/PLA/MA- -PE (L 0) ... U ... (F 5). ... LLDPE/LDPE/PLA/MA- -PE ... A ...

Ph sical changes

P ... F 6 7 ... U ... 4% 6.4%, 0.92% ... 144 ... U ...

Concl sion

U ... LLDPE/LDPE/PLA/MA PE ... FTIR, SEM DSC.

...:

1. A U ... 1.5 ... LLDPE/LDPE/PLA/MA PE ... 54% 90.7% 48 ... LLDPE/LDPE/PLA/MA- -PE ... 50.2% 90.2% 144 ... U ...
2. D ... LLDPE/LDPE/PLA/MA PE ...

Peak Position (cm^{-1})	Characteristic group
2914- 2905, 28 cm^{-1}	CH symmetric and asymmetric stretching
1461cm^{-1}	CH_2 bending
720 cm^{-1}	vibration of CH_2
1756-1744 cm^{-1}	Ester carbonyl group
1190-1090 cm^{-1}	O-C=O stretching
1024	C-O stretching
1639-1600 cm^{-1}	C=C bond

Table 5: Data obtained from FTIR spectra.

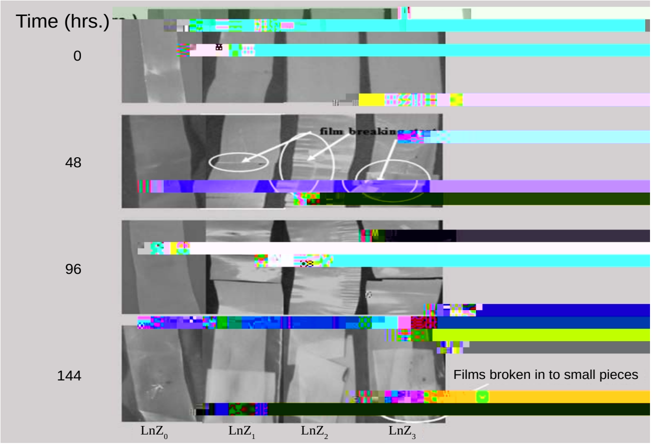

Figure 6: Physical changes after UV exposure of various LLDPE/LDPE/PLA/MAgPE blend and its nanocomposites.

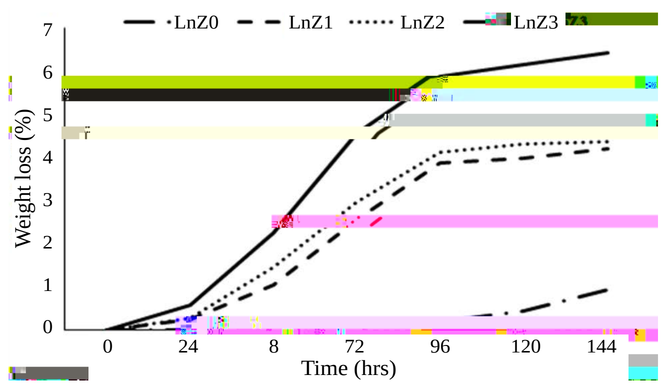

Figure 7: Weight loss (%) after UV exposure.

3. FTIR ... (1756-1749 $^{-1}$), 1190 -1090 $^{-1}$ (O-C=O ...) ... 721 $^{-1}$ ... 1461 $^{-1}$ ... $-CH_2$ ... $-CH_2$ ... U ... U ...
4. S ... SEM ... 1.5 ... LLDPE/LDPE/MA PE (L 3) ... LLDPE/LDPE/MA PE (L 0) ... 96 ... U ...
5. ... 6.4% LLDPE/LDPE/PLA/MA PE/ ... (L 3) ... 0.92% LLDPE/LDPE/PLA/MA- -PE (L 0) ... U ...

Acknowledgements

The authors would like to acknowledge for FTIR analysis to Mr. Deepak Sharma from CDRI (Central Drug Research Institute), Lucknow, Uttar Pradesh, India.

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