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**BOOK OF
ABSTRACTS**

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Irradiation resistance of elastomeric composites based on NR/CSM blend and waste rubber powder

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Effect of waste rubber particles (WTR) size on elastomers based on natural rubber and chlorosulfonated polyethylene rubber (NR/CSM= 50:50) was studied. Two types of WTR with different particle size (150–250 μm and 450–600 μm) were used. The content of carbon black was constant but the content of WTR was varied from 0 to 40 phr. The compounds were prepared by two-roll mill. The crosslinked materials were obtained in hydraulic press. The irradiation of prepared composite materials was carried out using ^{60}Co gamma source at ambient temperature with the dose rate 10 $\text{kGy}\cdot\text{h}^{-1}$ and different total absorbed dose (100, 200 and 400 kGy). The morphology of the samples was examined by scanning electron microscopy. It was assessed that WTR with smaller size got uniform dispersion. Mechanicals properties were assessed for irradiated and not-irradiated samples. It was estimated that the waste rubber particles with smaller size affected better enhancement of the mechanical properties. However, tensile strength and elongation at break decreased with increasing of WTR content.

