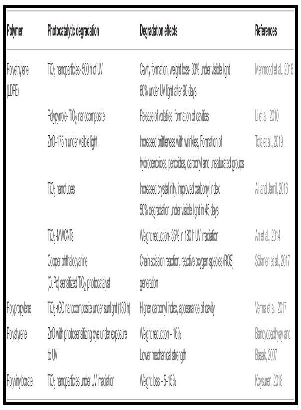
Degradation effects of pyrolysis liquids on metals, plastics and elastomers

National Library of Canada - Pyrolysis of Municipal Wastes



Polymer	Photocatalytic degradation	Degradation effects	References
Polyethylene (LDPE)	TiO_2 nanoparticles- 500 h of UV	Cavity formation, weight loss- 33% under visible light 60% under UV light after 90 days	Mehmood et al., 2016
	Polypyrrole- TiO_2 nanocomposite	Release of volatiles, formation of cavities	Li et al., 2010
	ZnO–175 h under visible light	Increased brittleness with wrinkles, Formation of hydroperoxides, peroxides, carbonyl and unsaturated groups	Tofa et al., 2019
	TiO_2 nanotubes	Increased crystallinity, improved carbonyl index 50% degradation under visible light in 45 days	Ali and Jamil, 2016
	TiO_2-MWCNTs	Weight reduction- 35% in 180 h UV irradiation	An et al., 2014
	Copper phthalocyanine (CuPc) sensitized TiO_2 photocatalyst	Chain scission reaction, reactive oxygen species (ROS) generation	Sökmen et al., 2017
Polypropylene	TiO_2-rGO nanocomposite under sunlight (130 h)	Higher carbonyl index, appearance of cavity	Verma et al., 2017
Polystyrene	ZnO with photosensitizing dye under exposure to UV	Weight reduction – 16% Lower mechanical strength	Bandyopadhyay and Basak, 2007
Polyvinylborate	TiO_2 nanoparticles under UV irradiation	Weight loss – 5–15%	Koysuren, 2018

Description: -
-degradation effects of pyrolysis liquids on metals, plastics and elastomers
-
Canadian theses = -- Thèses canadiennesdegradation effects of pyrolysis liquids on metals, plastics and elastomers
Notes: Thesis (M.A.Sc.) -- University of Toronto, 2001.
This edition was published in 2001

Tags: #Catalytic #Co

Thermal Degradation of Plastic Wastes (PP, LDPE) Using Metal Particles, Metal Oxides and Metal Nano Particles as a Catalyst

Panda AK, Singh RK 2014 Conversion of waste polypropylene to liquid fuel using acid-activated kaolin.

Catalytic Co

The single ring aromatic compounds consisted of mainly toluene, ethylbenzene and xylenes, while the 2-ring hydrocarbons were mainly naphthalene and their alkylated derivatives. KAGAKU KOGAKU RONBUNSHU 2017, 43 4 , 178-184.

Hydrocracking of a Plastics Pyrolysis Gas Oil to Naphtha

The SS tube is heated externally by an electric furnace, with the temperature being measured by a Cr—Al: K type thermocouple fixed inside the reactor. The sources of this material are highly correlated with the absence of effective waste management infrastructures. And your measured responses to all the queries is commendable.

Frontiers

The process of PVC dehydrochlorination can catalyze and accelerate the biomass pyrolysis.

Thermo

UV were completed in 5 h - very much less than conventional accelerated tests. However, we must point out that these assumptions have substantial consequences and can lead to extrapolation errors that represent decades or even centuries of additional lifetime. The global plastic production was estimated at around 300 million tons per year and is continuously increasing every year ;.

Thermal Degradation of Plastic Wastes (PP, LDPE) Using Metal Particles, Metal Oxides and Metal Nano Particles as a Catalyst

The API gravity of HDPE and PP were 27. Sustainability considers economic, ecological and social impacts. Upon comparing the hydrocarbon group type yields, PP gave high yield of paraffinic hydrocarbons while HDPE gave high yields of olefins and naphthenes.

Related Books

- Kommunikation und Konflikte bei städtischen Planungen
- Trumpet concerto = - Concerto pour trompette et orchestre
- Structuralist knowledge representation - paradigmatic examples
- Istishrāq al-Anjlūsaksūnī al-jadīd
- Révolution française