

Metal complexes as photoinitiating systems for radical and cationic photopolymerisation under visible light



- Group of compounds initiating system activated smoothly
- Allows simultaneous radical and cationic polymerisation
- Affords interpenetrated networks under mild conditions

KEYWORDS

Visible light
Interpenetrated polymer networks
Acrylic resin

PATENT

EP14158217
6 march 2014
WO2015132295
11 september 2015

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TECHNOLOGY

- Organometallic complexes generating radicals and cations
- Complexes activated by diode or halogen lamps (12-100mW/cm²)
- > 40 % conversion after 1 minute

APPLICATIONS

- Suitable for the production of interpenetrated polymer networks
- Polymerisation of epoxy and vinyl monomers
- Low intensity visible light induced photopolymerisation
- Suitable for scale-up production

INNOVATION ADVANTAGES

- Requires less amount of activation energy
- Polymerisation performed under air
- Reduced toxicity of the catalytic specie

DEVELOPMENT STATUS

- Characterisation of the synthesised polymers
- Determination of the scope of the system
- Looking for industrial partnerships

