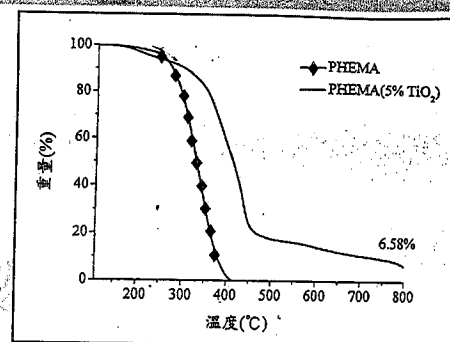




含高折射率之無機氧化物奈米微粒之穩定單體懸浮液及其製法

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 簡歷： <http://www.che.ntu.edu.tw/che/?p=435>



市場及需求:

本發明有關一種含無機氧化物奈米微粒之穩定單體懸浮液以及其製法，尤其有關一種含有高折射率之無機氧化物奈米微粒之穩定單體懸浮液以及其製法。

習知技術中，已知一些無機氧化物本身具有高折射率，如二氧化鈦、二氧化鋯或二氧化鈾等，故而若對該等無機氧化物進行有機改質，則可形成高折射率且透明之光學薄膜，而更進一步擴展其用途。

技術摘要(含成果):

本發明有關一種含有高折射率之無機氧化物奈米微粒之穩定單體懸浮液，其中該無機氧化物奈米微粒之折射率大於 1.65，且其中無機氧化物奈米微粒之平均粒徑介於 1~100nm 之間且於該懸浮液中之含量佔全部懸浮液重量之 1.0~10.0 重量%。本發明又有關該含有高折射率之無機氧化物奈米微粒之穩定單體懸浮液之製法。

優勢:

可直接在單體中合成穩定懸浮的二氧化鈦顆粒/由於直接在單體中合成二氧化鈦顆粒，透明膜，合成導電薄膜等。皆可藉由此技術將二氧化鈦無機顆粒均勻分布其中。

競爭產品:

高折射率透明光學薄膜、優異熱穩定性質高分子材料、高折射率導電膜、高折射率複合乳膠顆粒。

專利現況:

聯絡方式(請不用填):

臺大產學合作總中心

Tel: 02-3366-9945, E-mail: ntuciac@ntu.edu.tw

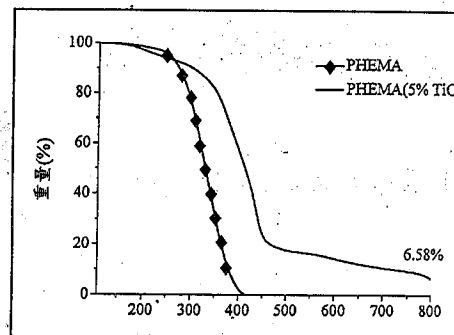


STABILIZED MONOMER DISPERSION CONTAINING INORGANIC OXIDE NANOPARTICLES WITH HIGH REFRACTIVE INDEX AND ITS PREPARATION

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Market Needs:

It is well known that some inorganic oxides such as titania (also known as titanium dioxide), zirconia (also known as zirconium dioxide), and ceria (also known as cerium dioxide) exhibit high refractive index. Therefore, such high refractive inorganic oxides were modified with organics, they can be formed into transparent and high refractive optical films and thus increase their utility.

Our Technology:

The present invention relates to a stabilized monomer dispersion containing inorganic oxide nanoparticles with high refractive index in which the refractive index of the inorganic oxide nanoparticles is greater than 1.65 and the average particle size of the high refractive inorganic oxide nanoparticles ranges from 1 to 100 nm and its content is in a range of from 1.0% by weight to 10.0% by weight based on the total weight of the monomer dispersion. The present invention also relates to a process for preparing the stabilized monomer dispersion containing high refractive inorganic oxide nanoparticles.

Strength:

Stable titanium dioxide nanoparticles were synthesized in different kinds of monomer and had uniform distribution in the polymer by polymerization of the monomer.

Competing Products:

Optical properties of high refractive index transparent thin films, high thermal stability material, high refractive index conductive thin films, high refractive index latex composite materials.

Intellectual Properties:

Contact (do not need to fill out):

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