

Title (en)

Use of polyelectrolyte complexes for the production of polymer films with oxygen barrier properties

Title (de)

Verwendung von Polyelektrolytkomplexen zur Herstellung von Polymerfolien mit Sauerstoffbarriereigenschaften

Title (fr)

Utilisation de complexes de polyélectrolytes pour la fabrication de films polymères ayant des propriétés de barrière à l'oxygène

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Application

EP 12195417 A 20100817

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- EP 2010061925 W 20100817

Abstract (en)

Use of at least a polyelectrolyte complex to provide an oxygen barrier for packaging materials made of polymer films, is claimed; where: the polymer construction components of the polyelectrolyte complex are applied to the polymer film in a polymerized form; and the polymer film is coated e.g. with an aqueous dispersion comprising a dispersed polyelectrolyte complex and produced through water-in-water emulsion polymerization, and polyelectrolyte complexes form on the mutually adjacent boundaries of the alternating layers. Use of at least a polyelectrolyte complex to provide an oxygen barrier for packaging materials made of polymer films, is claimed; where: the polymer construction components of the polyelectrolyte complex are applied to the polymer film in a polymerized form; and the polymer film is coated either with an aqueous dispersion comprising a dispersed polyelectrolyte complex and produced through water-in-water emulsion polymerization, or with a composition comprising a polyelectrolyte complex produced from an anionic polymer and cationic surfactant, or the polymer film is coated with at least three alternating layers, where each of two adjacent layers comprises an anionic polyelectrolyte construction component and the other of the two adjacent layers comprises a cationic polyelectrolyte construction component, and polyelectrolyte complexes form on the mutually adjacent boundaries of the alternating layers. An independent claim is included for the polymer film, obtained and coated using the polyelectrolyte complex, in which at least one side of the polymer film is coated with the three alternating layers.

Abstract (de)

Beschrieben wird die Verwendung von Polyelektrolytkomplexen um Verpackungsmaterialien aus Polymerfolien eine Sauerstoffbarriere zu verleihen. Polymere Aufbaukomponenten des Polyelektrolytkomplexes werden in polymerisierter Form auf die Polymerfolie aufgebracht. Die Polymerfolie wird mit einer einen aus anionischem Polymer und kationischem Tensid hergestellten Polyelektrolytkomplex enthaltenden Zusammensetzung beschichtet oder die Polymerfolie wird mit mindestens drei alternierenden Schichten beschichtet, wobei jeweils eine von zwei benachbarten Schichten eine anionische Polyelektrolytaufbaukomponente enthält und die andere von zwei benachbarten Schichten eine kationische Polyelektrolytaufbaukomponente enthält und sich an den gegenseitigen, benachbarten Grenzflächen der alternierenden Schichten Polyelektrolytkomplexe bilden.

IPC 8 full level

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CPC (source: EP US)

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Citation (applicant)

- WO 03068869 A2 20030821 - BASF AG [DE], et al
- EP 2014730 A1 20090114 - KUREHA CORP [JP]
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- WO 9831719 A1 19980723 - EG TECHNOLOGY PARTNERS LP [US], et al
- D. HORN, PROGR. COLLOID & POLYMER SCI., vol. 65, 1978, pages 251 - 264

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