Hawaiian names for baby boy with meaning

Sulfonation increases the surface area of the potential of Zeta graphene, therefore it has a high dispersion property in aqueous solution, which ensures the high interaction of sulfonate graphene with aromatic pollutants and thus ensures the high adsorption of organic dyes in sulfonate graphene (Zhao et al., 2011). From: Nanomaterials for sewage remediation, 2016Chaohui Wei, ... George Z. Chen, in Polymer Composites with Functionalized Nanoparticles, 2019Sulfonation of CNMs has increased in popularity because sulfur-containing groups are also very effective in increasing the dispersion of CNMs into aqueous solvents and improving CNM's interfacial interaction with the polymer matrix. Most current methods used to sulfonate CNMs typically use preoxidized CMs as the initial materials. For example, CNTs-(SO3H)n were produced by heating a mixture of oxidized CNS and concentrated sulphuric acid at 300°C for 12-18 hours [39]. It has also been reported that microwave treatment of a mixture of SNC with sulphuric and nitric acids is an effective and environmentally friendly means of modifying CS with carboxyleate (–OH and –COOH) and sulfonate [(–SO2 · OH)] groups [40]. Aryl diazonium salts are also used as sulfur precursors to sulfonate CNMs. Procedures usually reduce go with the help of NaBH4 followed by sulfonation with aryl diazonium salts, which is subsequently reduced by using N2H2[42]. Other reports have also described the use of oleum, sodium nitrate and sulphulic acid in GO sulfonation[36]. The interaction between π and SO3 of sulfonated CNMs with PAni's quinonoid rings improves the load transfer process. In addition, the high conductivity of CNMs in the compound create a management network for improving electronic conductivity and effective interfacial redox activity [41.44]. S-CNTs or S-graphene, in addition to acting as a framework for –SO3H to improve proton conductivity in Nafion, also contributes to the improvement of the mechanical force of the membrane [45–47]. In addition, the sulfonate CMMs used in polymer electrolyte membrane (PEM) act as an acid from the state of Bronsted, which improves proton conductivity and can also reduce methanol permeation when PEM is used in methanol fuel cells. In addition, the inclusion of graphene S in Nafion's matrix has been shown to be capable of reducing hydrogen crossing, due to the high surface area of graphene S, which increases the length of the path of hydrogen transport through polymer chains. This property is also coupled to the wrinkle of the structure of graphene due to the inclusion of sulfur, and this results in an increase in surface roughness of the compound, which was to be important in increasing the absorption of water from the composite membrane[48]. Sivakumar Pandian, ... Vijaya Kumar Booramurthy, in Refinement of Biomass Waste for Sustainable Energy and Bioproducts, 2020 Direct Defonation proves to be the simplest and most widely used method among existing acid catalyst preparation techniques in which direct carbonization and biomass sulfonation are carried out by sulphuric acid at a predetermined time and temperature (Kang et al. , 2014; Guo et al., 2017). The main advantage of this process is the economic aspect since it does not require any complicated pretreatment. Savaliya and Dholakiya (2015) synthesized the acid catalyst of bagasse sugar cane through on-site sulfonation and carbonization. They recognized that this process was convenient by giving a return of 25-35 wt.% catalyst. In addition, this catalyst was investigated to catalyse the stock of soap that resulted in a maximum FFA conversion of 97.2%. A study on its reuse showed that it can be used up to three consecutive cycles without any significant loss in its activity. Guo et al. (2017) reported that catalyst ownership can be improved by inserting additives during the process. The study also revealed that the directly sulfonate catalyst had relatively poor catalytic activity, low acid site density that could be improved by adding phenol during reaction. This is due to the reaction of phenol with monosaccharides that form phenol derivatives that become even more dehydrated, sulfonate, polymerized and moderately charred to small carbohyps with SiO2. In the end, these small particles accumulate to form hydrophobic rainfall of carbonacid catalyst particles. The leaching of –SO3H paves the way for a slight reduction of its activity during the recycling of the catalyst. This method requires more studies in order to improve the stability of the group –SO3H on the carbon surface. Johannes Karl Fink, in High Performance Polymers (Second Edition), 2014PES are watertrophic. For applications in membrane technology, it would be desirable to raise your water affinity. An effective method to increase water affinity is sulfonation. The sulfonation mechanisms of high polymers have been revised by Kučera and Jančář. The sulfonation reaction continues easily in the presence of groups, such as Cl,NH2, OH, SH, etc. In fact, the active agent in the sulfonation reaction is the SO3+ cation. The sulfonation of aromatic compounds is a reversible reaction. Sulfonating agents can be classified into three groups, i.g. [39]:1.Electrophilic agents: sulfuric acid, chlorosulphonic acid, fluorosulphonic acid,2.Nucleophilic agents: sulphites, hydrogen sulphites and sulfur dioxide, which with halegen derivatives and double links, and3. Agents that react radically: sulfur chloride, mixtures of sulfur dioxide and chlorine. The sulfonation of monomer monomers condensation or direct sulfonation of the polymer results in water reedrophilic materials. These materials are used in membrane technology, particularly in the manufacture of fuel cells. When monomers are sulfonated, the degree of sulfonation of polymers can be controlled by varying the ratio of non-sulfated monomer feeding to sulfonate monomer. Intrinsic viscosities of polymers increase with the degree of sulfonation[40]. PES sulfonation can be carried out in chloroform and chlorosulphonic acid at 0 °C. The reaction is complete after 15 min. For the sulfonation of PAESA-b-poly(butadiene) copolid block, Acetyl sulfate, which can be prepared from concentrated acetic anhydride sulfuric acid, is successfully used [42].N. Sekar, in Textile and Industrial Dyeing Manual, 2011These are obtained by sulfonation of the corresponding dye base derived from quinizarin or halo amino anthraquinones. Quinizarin reaction products with aromatic or aralifatic amines predominate in number and importance. The introduction of hydroxy function at 5- or 5.8 positions causes the expected red change. The substitutes influence the speed and levelling of washing. The shade can vary from bright blue to green for appropriate amines. Sterilely hampered amines, aralifatic and cyclo-asian amines lead to bright blue tones. The dyes in this series show faster than those derived from brominity acid. Among the non-asymmetric non-substituted dyes derived from 1-amino or 1-alkylamino-4-haloaminoanthraquinones, 1-alkylamino anthraquinones have a lower light speed. Exceptions are 1-sec-alkylamino-4-halo anthraquinones. The introduction of alkoxy or aryloxy groups into position 2 introduces a blue change by giving bright violet dyes. Examples are C.I. Acid Green 25, C.I. 61570 [4403-90-1] (59), C.I. Acid Green 41, C.I. 62560 [4430-16-4] (60), green blue dyes 61, 62 and C.I. Acid Violet 42, C.I. 62026 [64026 [6408-73-7] (63). Sangeetha Dharmalingam, ... Moogambigai Sugumar, in Microbial Electrochemical Technology, 2019CEMs are mainly prepared for sulfonation or bromination. The properties of this produced membrane are controlled through the content of bromo methylation and aryl sulfonation, [89]. Nafion is one of the most widely used CEOs due to its high proton conductivity, and intensive research has also focused on several new perspectives on membranes using nylon, cellulose, J-cloths, polycarbonates, Teflon-coated layers as efficient separators to replace Nafion. CEM is the most common type of membrane used in MFC. Some of the non-Nafion commercial CEOs include Hyflon, Zifron, Ultrex, CMI-7000. Apart from commercial membranes, several other polymer membranes have also been investigated solid electrolytes for their suitability as separators in MFC devices. Ayyaru and Sangeetha [90] reported as an efficient PEM for single-chamber MFC operation. Typically, polystyrene (PSEBS) was sulfated using chlorosulphonic acid (CSA). The procedure was adopted from the reported article [91]. The heavy PSEBS polymer was taken in a round three-neck flask and dissolved into a measured amount of chloroform solvent to obtain a clear polymer solution and the solution was allowed to cool in an ice bath. Five milliliter of tax phosphate followed by the required amount of CSA were added drop-like over a period of time with vigorous agitation in the nitrogen atmosphere. The reaction was carried out in an ice cold state for 3 h. After 3 h the reaction ended up adding low molecular weight aliphatic alcohol to the reaction mixture and the agitation continued for another 2 h to obtain a uniformly mixed product. The solution mixture obtained was poured into a glass plate and the solvent was allowed to evaporate to obtain dry sulfonate polymer. To remove excess acid from the product, the polymer was washed with deionized water for several times until the neutral pH. The purified product dried at 60°C for a day and the degree of sulfonation was found to be 43%. The prepared membrane had 106.9% more power density compared to Nafion's 117. Also the report suggested that SPSEBS produced only 70 00 000 people, versus 125 nafion 117; internal resistance of water inflammation was 164% compared to 22% of Nafion; and the oxygen permeability of the newly prepared membrane was a lower order than that of Nafion 117, making it ideal for maintaining the anaerobic environment in the MFC anode chamber resulting in increased EC and power density. Similarly, the synthesized membrane cost was $250/m2 compared to Nafion 117, which was $1500/m2 (Fig. 1.7.19). Figure 1.7.19. Schematic representation of the preparation of polystyrene sulfonate ethylene (Sangeetha). Venkatesan and Sangeetha [92] have reported the operation of a single MFC chamber using the PEEK polymer (polyether ether). The polymer should be sulfured using sulfuric acid as a sulfonate agent. The heavy amount of PEEK was dissolved in sulphuric acid with continuous agitation for 5 h. After 5 a.m. the mixture was poured into crushed ice to form a white precipitate that was washed several times by deionized water until a neutral pH is obtained. The SPEEK formed was dissolved in suitable solvents such as N-Methyl Pyrrolidone (NMP), dimmethylformamide (DMF), etc. It was discovered that the thickness of the membrane was 120 μm with an IEC of 0.9 mmol/g, with a 20% water absorption capacity. They were also studied and various compounds of the same polymer with zeolite, iron oxide and rutile titanium nanoparticles (Table 1.7.4, Fig. 1.7.20). Table 1.7.4. Various reports on different membrane of cation exchange in Pila de combustibleS.NoMembraneCaracteristics Densitat de potènciaReferència1Sulfonat poliether èter cettone (SPEEK) en comparació amb Nafion 117 en MFC d'una sola càmera (SCMFC)Ko = 2.4 × 10−6 cm/sIEC = 1,87 meq/gσ = 0,148 × 10−3 S/cmInflor d'aigua = 15.87Thickness = 0.148 × 10−3 S/cmInflor d'aigua = 15.87Thickness = 0.87Segons = 0, 0205.7 W/m3[92]2L alcohol (operació de 32 dies)L'eficiència coulombic va ser 10%–15% superior als separadors de fibra de vidre1220 mW/m2[2[97]3Polímers diversos a Nafion 117 com polidimetilsiloxane (PDMS), SPEEK, closca d'ou en SCMFCStudies en espaiat d'elèctrodes segons el material utilitzat com a membrana. Egg shell membrane had the lowest internal resistance, whereas PDMS membrane had the highest power density12.4 mW/m3[98]Antolini [99] has reported a review on metal–polymer, polymer–polymer, carbon–carbon composites in MFC operation as anode catalyst, cathode catalyst, and membranes.4SPEEK + sulfonated TiO2 in SCMFCThickness = 120 μmIEC = 1.05 meq/gWU (%) = 39Ko = 0.8 x 10−6 cm/s1202.5 mW/m2[84]5Sulfonated polystyrene ethylene butylene polystyrene (SPSEBS) + sulfonated SiO2IEC = 3.015 meq/gWU (%) = 40Ko = 0.75 × 10−5 cm/s1209.7 mW/m2[100]6SPSEBS + sulfonated TiO2IEC = 3.35 meq/gWU (%) = 220σ = 3.574 × 10−2 S/cmThickness = 180 μm1345 mW/m2[83]7SPEEK + ZeoliteIEC = 1.47meq/gWU (%) = 15.83σ = 0.148x10−2 S/cmThickness = 0.018 mmKo = 4 × 10−6 cm/s176 mW/m2[101]8SPEEK + Rutile TiO2IEC = 1.98meq/gWU (%) = 21.83σ = 0.167 × 10−2 S/cmThickness = 0.018 mmKo = 2.2 × 10−6 cm/s98.1 mW/m2[93]9SPEEK/Fe3O4 in SCMFCIEC = 1.88meq/gWU (%) = 20.63σ = 0.165 × 10−2 S/cm enhanced proton hopping mechanismThickness = 0.018 mm104 mW/m2[102]10SPEEK/Monmorittonite3% MMT + 70% sulfonation of SPEEK had higher open circuit voltage, electrochemical performance, and reduced oxygen permeability104 mW/m2[103]11SPEEK/Triaminopyrimidine /Cloisite 15ABased on chemical oxygen demand level[104]12Chitosan noncovalently functionalized with multiwalled carbon nanotubes in SCMFCThickness = 0.024 cmWater absorption/weight = 0.7%46.94 mW/m2[92]13Activated carbon/Nafion 117Mean pore size = 45 nmAverage roughness = 25.45 nmPorosity = 47.657.64 mW/m2[58]14SPEEK on poly ether sulfone (PES) in SCMFCThickness = 0.15 mmKo = 12.96 × 10−4 cm/sDO = 19.44 × 10−6 cm/s140 mW/m2[105]15Polyvinyl alcohol /Silicotungstic Acid (STA)/Graphene oxide in SCMFCσ = 3.5 × 10−2 S/cmKo = 6.1 × 10−6 cm/sΩ = 112CE% = 3.141.9 W/m3[106]16SPEEK/STAIEC = 1.98 meq/gWU (%) = 21.28σ = 0.154 × 10−2 S/cmThickness = 0.019 cm207 mW/m2[107]Figure 1.7.20. Representació esquemàtica de membrana d'intercanvi de cation per a membrana composta d'èter de poliether sulfonat (Venkatesan i Sangeetha). Venkatesan i Sangeetha [93] van informar sobre les característiques de Swap resin (IER) which was used as a filler to manufacture SPEEK composite membrane and compared performance to conventional nafion membrane. IER-based compound membranes showed maximum conductivity among the different fillers used. Mokhtarian et al. [94] studied the composition of the Nafion 112/PANI membranes in MFC. The compound was prepared by submerging the Nafion 112 in an atrial solution during various periods of immersion. The maximum power density obtained was nine times higher than the pristine membrane and was also comparable to that of commonly used nafion 117. The compound also showed better proton conductivity and less susceptibility to biofouling. Shahgaldi et al. [95] relates the compound PVDF/Nafion testing in various quantities of Nafion in grams and electrospun PVDF. 0.4 g PVDF/Membrane nafion is reported to produce a maximum power density and even greater collubic efficiency to that of Nafion 117. Lim et al. [91] produced SPEEK for a phase investment technique and composed it with PES, a cheap low-conduct polymer. Pes membrane conductivity increased in addition to prophilic SPEEK. WEIGHT/SPEEK of 5% showed a maximum power density in operation MFC. Gohil et al. [96] reported a PEM filled with pores using polycarbonate engraved as a substrate and polyvinyl alcohol (PVA) as a pore filling compound. PVA stabilized using gluteraldehyde (72 h) showed maximum power density. Hoskins et al. [97] reported the use of spray in PVA separators in an MFC air cathode. These separators were known to protect cathodes from biofouling and electrode short circuit. A maximum power density of 339 ± 29 mW/m2.K. Murugesh Babu was obtained in Silk (Second Edition), 2019 AcidSyfuges are named because the substances were originally applied in a bath containing mineral or organic acid. They are almost all organic acid sodium salts in which anion is the active color component. Acid dysals are usually sodium salts of sulphonic acids, less often carboxylic acids, and are therefore anionic in solution aqueous. They will dye fibers for cationic sites and are usually replaced by ammonium ions in wool, silk and nylon. These fibers absorb acids. The acid protonates the amino groups of the fiber, making them cationic. Dyeing involves exchanging the anion associated with an ammonium ion in the fiber, with a dye in the bathroom. The reaction of silk fiber with acid dye is shown in fig. 5.1. Acid dyes produce bright tones with good light speed, but from bad to moderate speed of washing that can be improved by treating them with a cationic dye fixation agent (2-4 g/L) at 40-50°C for 20 min. Acid dyes generally show poor on silk, requiring topping with basic dyes to produce even shades.Fig. 5.1. Acid dye reaction with silk fiber. There are many different chemical types of acid colors (Table (Table Azo sulfonated dyes are the main group and are mainly mono and bis-azo compounds that go from yellow, through red to violet and brown (Fig. 5.2). There are some navy blue bis-azo dyes that can be built to give black. Azo dyes for polyamide fibers and proteins have a greater substantiveness. The higher its molecular weight, the lower the number of groups of sulfonats per molecule. Anthraquinone acid dyes complement azo dyes and run from violet to blue to green. These colors often have very good light speed. Acid dyes with triphenylmethane (blues and greens) and xanthene chromophoruses (reds and violets) are less important types that are noticed for their bright colors and often have little light speed. Sulfonated copper ftalocyanine dyes provide bright turquoise dyes of very good light speed. Acid dyes are commonly classified according to their dyeing behavior, especially in relation to dyed pH, their migratory ability during dyeing and their speed of washing. Table 5.2. The chemical constitutions of some typical acid shotsParèmetresVella acid dyesFast dyesMillora of dysaliccia DyesSuper-fresatAcid usedSulphuricAceticAcetic or NH4+NH4+Dyebath pH2–44–65–76–7Migration abilityHighModerateLowVery lowWashing fastPoor-fairGoodVery goodMolty goodMolecular weightLowModerateHighVery highDye solubilityHighModerateLowLowState in solutionMolecularAggregatedAggregatedSstantivity (pH 6)Very lowModerateHighHighFig. 5.2. Chemical structure of some typical acidic dyes. Molecular weight and the degree of sulfonation of the dye molecule determine these dyeing characteristics. The original classification of this type, based on its behavior in silk dyeing, is as follows: level dyeing or acid dyes matching;•rapid acid dyes;•milling acid dyes and super milling acid dyes. Exhaust dye in neutral pH or acid is a widely used method that starts at 40-45°C, followed by the addition of CH3COOH (2-4%) and Na2SO4 (5–10%) in the bathroom to maintain a pH ~ 4-5. Dye is added and the dye continued for 10 min. The temperature rises to 80-85 °C for 45 min; dyeing at higher temperatures reduces the lustre. The dye continues for 30-90 min more to promote the diffusion of dye in the fibers, thus improving washing and rubbing speed. A thorough wash removes the surface dyes. Strong acid dyes can also be applied to pH ~3–4 using 1-3% HCOOH (85%) and 5% glauber salt. Johannes Karl Fink, in High Performance Polymers (Second Edition), 2014 Peek hyperbranched sulbraonate was synthesized by the sulfonation of finished hyperbranched poly fluoro (ether aryl ketone) [86]. These materials were used in combination with sulfonate linear peek proton exchange membranes. All mixtures could be thrown into hard membranes. The structure of the S-HPAEK and the it investigated the stability, water absorption and proton conductivity of the S-HPAEK/S-LPAEK membranes. Membranes show good thermal stability, better water catchment, and good proton conductivity compared to a polished sulfonate linear PEEK[86]. Frederick J. Dechow, in Manual of Fermentation and Biochemical Engineering (Third Edition), 2014The strong exchange of acids is done by sulfonation of the matrix copolemer. Strong acid resins are characterized by their ability to exchange cations or neutral split salts. They will work in the entire pH range. The synthesis of weak acid resins has been described above. The ability of this type of resin to divide neutral salts is very limited. The resin has the greatest affinity for alkaline metal ions in the presence of alkalinity. Only limited capacities are obtained for alkaline metals when there is alkalinity other than hydroxide. Effective use is limited to solutions above pH 4.0.Anion exchange resins require the synthesis of an active intermediate. This is usually done in the process called chloroethylization. The posterior intermediate is reactive with a wide variety of amines that form different functional groups. Type I resin is a quaternized amine resin resulting from the reaction of trimilamine with the chloromilate copolicèmer. This functionalized resin has the best basic functional group available and has the highest affinity for weak acids. However, the efficiency of regenerating the resin in the form of hydroxide is somewhat lower than type II resins, especially when the resin is depleted with monovalent anions. Type II resin results when dimethylethanolamine reacts with the chlorromilate copolicèmer. This quaternary amine has a lower basicity than that of type I resin, but is high enough to eliminate anions of weak acids in most applications. While caustic regeneration efficiency is significantly higher with type II resins, its thermal and chemical stability is not as good as type I resins. Dymethylamine is commonly used. The ability of weak base resins to absorb acids depends on the basicity of the resin and the pK of the acid involved. These resins are capable of absorbing strong acids in good capacity, but are limited by kinetics. Kinetics can be improved by incorporating about 10% strong base capacity. While strong base anion resins work throughout the pH range, weak base resins are limited to solutions below the pH 7.La desired functionality in the selected matrix will be determined by the nature of the biochemical solute to be removed from the solution. isoelectric point, ph restrictions on separation and ease of Resin species play an important role in the selection process. Some resins have been developed with functional groups specifically to absorb certain types of ions. The resins shown in table 16.9 are commercially available. Frame 16.9. Commercial resins with special functional groupsStructureIminodiacetateR-CH2N(CH2COOH)2 PolyamineR-(NC2H4)mHThiolR-SHAminophosphateR-CH2NHCH2PO3H2AmidoximePhosphateR-PO3HThe selectivity of these resins depends more on the complex that is formed instead of the size or load of the ions. They are generally effective in polar and non-polar solvents. However, the capacity of several ions is responsive to pH so that adsorption and elution can be carried out through pH changes in the solution. These chelating resins have found most of their use in metal ion recovery processes in the chemical and waste recovery industries. They can find use in fermentation applications where the cult organism requires the use of metal ion cofactors. Specific ion exchange resins have also been used in laboratory applications that can find eventual use in biotechnology product recovery applications[53]. Warshawsky has compiled a review of selective ionism exchange resins. A diaminothetrastatic polymer developed by Mitsubishi [55] was developed for the purification of amino acid feeding solutions. Chloroethylene conversions into tioolate derivatives for peptide synthesis have been described by Warshawsky and coworkers. Christian Vargel, , in Aluminum Corrosion, 2004-H2NSO3H Sulphur acid [1967]This acid is also called aminosulphonic acid. It's a sulfonation agent. It is a strong acid: the pH of a solution at 22 g.1-1 is 1.5. It is highly water soluble: 20 g.1-1 to 15 °C and 320 g.1-1 to 50 °C. Its solutions are used as a de-escalation agent, especially in household appliances that heat water, such as electric coffee makers. Boiling sulphur acid is partly broken down into sulphuric acid, which explains why the rate of dissolution of aluminium increases rapidly with temperature (Table E.5.5) [6]. Table E.5.5. Dissolution rate in sulphur acidAlloyConcentration (g.1-1)Dissolution rate (mm per year)20°C55°C95°C1199100.30.91000.52.52. 55000.43.01050100.71.11001.17.45001.315.03003100.50.710 01.38.05001.216.0575410.010.7100.7100.0011.616.0500.012.118.018.006005A1001.27.55001.715.0Experience has shown that hot sulphur acid solutions can be used for descaling tubes and heat exchangers in aluminum without corrosion risk. However, concentrated solutions of sulphamic acid near boiling point should not remain in contact with aluminium equipment for hours, since the risk of corrosion of becomes significant. Walther Grot, in Fluorinated Ionomers (Second Edition), 2011Empelt of stretch deradiation in fep or pTFE films followed by sulfonation has been used for partially fluorinated ionomer films. Syrene has also been grafted to nafion® supercritical carbon dioxide using an azo initiator. Cross-pTFE stretch radiation graft is described in Ref. Syrene radiation graft on polyvinylene fluoride (PVDF) and PVDF/HFP copolymers have been reported to Ref. [39]. In all these cases, the graft polymer is subsequently sulfured. The stability of films obtained by styrene radiation graft in FEP can be improved by adding divine benzene (DVB) as a cross-border agent to the graft solution[40]. As an example, a 25-µm thick FEP film (FEP 100A, DuPont) was irradiated by an electron beam with a dose of 3-5 kGy, followed by introduction into a stainless steel reactor containing the graft solution. The graft solution consisted of styrene containing 0-20% DVB dissolved in an isopropanol/water mixture. The films were washed with toluene and dried up. The degree of graft, as determined by weight gain, was 17-21%. The film was sulfonated using a 2 vol. % chlorosulphonic acid solution in methylene chloride. Complete sulfonation was verified by qualification. Without any DVB, the EW for the degree of grafting given can be calculated as 800-680. For the DVB containing grafts, these numbers would be slightly higher. The thickness of the films containing DVB was 33-35 µm, and that of the film without DVB was 39 µm. The chemical stability of these graft polymers is, of course, limited, not because of the oxidative instability of the C-H bond α in the aromatic ring (compare the easy conversion of pea to phenol and acetone through an intermediate peroxide). Some efforts have been made to stabilize these grafted polymers by removing the α-C-H. α.β.β-Trifluoro is a logical candidate (see Section 3.9.2). α-Methyl only results in poor graft performance; however, in combination with the acrimonytrile, reasonable results have been obtained [41] (see also Section 3.9.3). Stone et al. described the radiation graft of aromatic trifluorovinyls in a base film made from an Ethylene/TFE copermer (TEFZEL®) [43]. [43].