

Title (en)

PRODUCTION OF ALIPHATIC FLUOROCARBONS

Title (de)

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Title (fr)

PRODUCTION DE FLUOROCARBURES ALIPHATIQUES

Publication

EP 1198441 A4 20030122 (EN)

Application

EP 00950495 A 20000721

Priority

- US 0019863 W 20000721
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Abstract (en)

[origin: WO0107384A1] Processes for preparing a variety of fluorocarbons are disclosed. Processes are described wherein the yields of desired products are increased by endlessly converting the undesired products to reactive intermediates. Trifluoroethylene is prepared in greater than 50 % yield by pyrolyzing 1-chloro-2,2,2-trifluoroethane at a temperature about 725 DEG C. 1,1,1,3,3-Pentafluoropropylene is prepared by pyrolyzing 1-chloro-2,2,2-trifluoroethane in the presence of chlorodifluoromethane. Trifluoroethylene is prepared by pyrolyzing 1,2,2,2-tetrafluoroethane. 1-Chloro-2,2-difluoroethylene is prepared by pyrolyzing 1-chloro-2,2,2-trifluoroethane. 1,1-Dichloro-2,2-difluoroethylene is prepared by pyrolyzing 1-chloro-2,2,2-trifluoroethane in the presence of chlorodifluoromethane and hydrogen chloride. 1,1,1,2,3,4,4-Octafluoro-2-butene is prepared by pyrolyzing 1-chloro-1,2,2,2-tetrafluoroethane. 1,1,1,2,3,4,4-Octafluoro-2-butene is prepared by pyrolyzing 1,1,2,2,2-pentafluoroethane. 1,2,2,2-Tetrafluoroethane is prepared by pyrolyzing 1,1,2,2,2-pentafluoroethane. 1,1-Dichloro-1,2,2,2-tetrafluoroethane is prepared by pyrolyzing 1-chloro-1,2,2,2-tetrafluoroethane.

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Citation (search report)

- [XY] US 2627529 A 19530203 - FEASLEY CHARLES F, et al
- [XY] GB 1039468 A 19660817 - PECHINEY SAINT GOBAIN
- [XY] US 5177271 A 19930105 - ELSHEIKH MAHER Y [US], et al
- [PX] WO 9951553 A1 19991014 - DU PONT [US], et al
- [X] WO 9833755 A1 19980806 - DU PONT [US], et al
- [X] GB 2313118 A 19971119 - ATOCHEM ELF SA [FR]
- [X] EP 0877009 A1 19981111 - DAIKIN IND LTD [JP]
- [X] US 5856593 A 19990105 - POWELL RICHARD LLEWELLYN [GB], et al
- [X] EP 0402652 A1 19901219 - ATOCHEM NORTH AMERICA [US]
- [X] US 5475167 A 19951212 - NAPPA MARIO J [US], et al
- [XY] US 5523497 A 19960604 - LUI NORBERT [DE], et al
- [XY] FR 2690687 A1 19931105 - ATOCHEM NORTH AMERICA ELF [US]
- [Y] US 4613709 A 19860923 - FRANKLIN JAMES [BE]
- [XY] DATABASE CA [online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; DIFELICE, JOHN J. ET AL: "Thermal reactions of 2-chloro-1,1,2-tetrafluoroethane", XP002220687, retrieved from STN Database accession no. 126:117682 & COMBUSTION SCIENCE AND TECHNOLOGY (1996), 116-117(1-6), 5-30
- [XY] DATABASE CA [online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; SALMON, ROBERT P. ET AL: "Experimental flow tube study on pyrolysis of 2-chloro-1,1,1-trifluoroethane", XP002220688, retrieved from STN Database accession no. 126:131133 & CHEMICAL AND PHYSICAL PROCESSES IN COMBUSTION (1996) 507-510
- See references of WO 0107384A1

Citation (examination)

- US 5654494 A 19970805 - TUNG HSUEH SUNG [US], et al
- EP 0594859 A1 19940504 - DAIKIN IND LTD [JP]
- US 5155082 A 19921013 - TUNG HSUEH S [US], et al
- WO 9008755 A1 19900809 - DU PONT [US]
- EP 1038858 A1 20000927 - DAIKIN IND LTD [JP]
- US 2413695 A 19470107 - DOWNING FREDERICK B, et al
- DD 43244 A
- DATABASE BEILSTEIN [online] accession no. rid 1856358
- DATABASE BEILSTEIN [online] accession no. rid 175786

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