

## Gute Chemie – abcr service lab

Reaction types towards unique building blocks

## to access specialized know-how

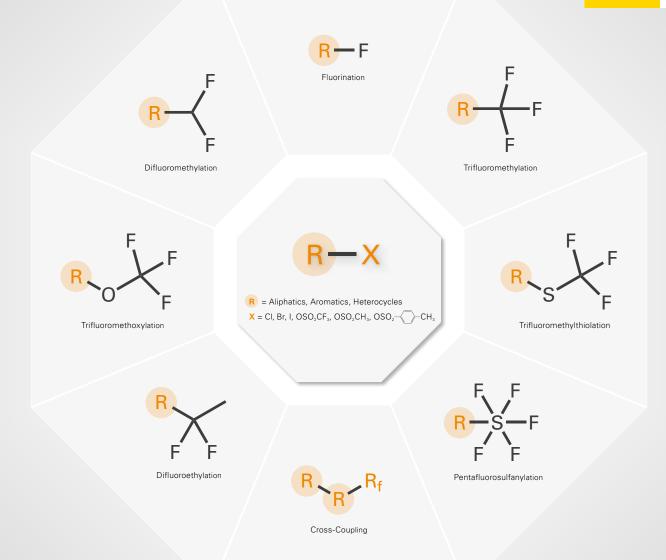


#### Toolbox for synthesizing various unique building blocks

- Sophisticated reaction sequences give access to unique compounds
- Wide range of reactions and conversions
- Access to a broad variety of substrates
- Best practice protocols with diverse conditions elaborated







# Gute Chemie – abcr service lab Introduction of fluorinated groups

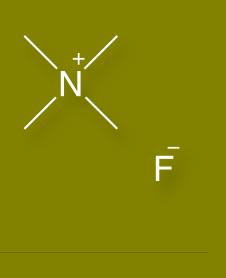
## with core competency in synthesis

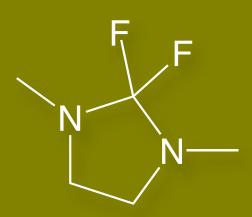


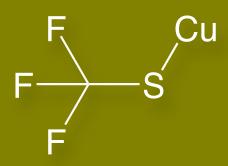
#### Introduction of fluorinated groups

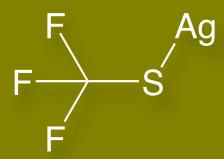
- Substitution of fluorinating agents with highest toxic and hazardous potential due to safety, waste and environmental reasons
- Proprietary protocols for less harmful reagents and reaction conditions
- Development of robust and economic synthesis routes that are scalable
- Design of new reagents
- Access to a broad variety of substrates











# Gute Chemie – abcr service lab

Toolbox for your fluorine chemistry

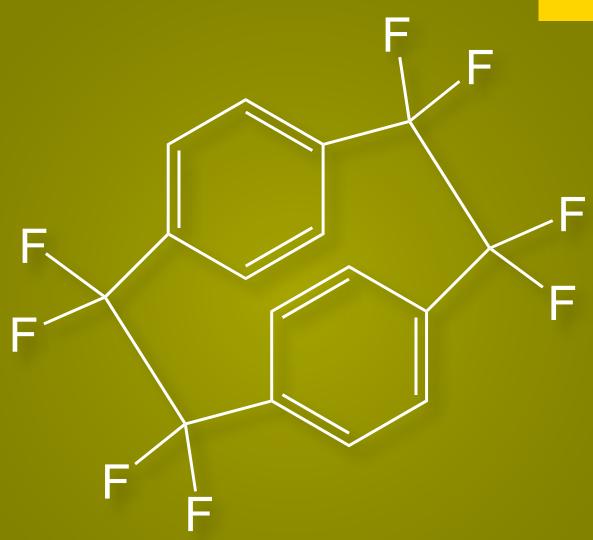
## for your work simplification



#### **Expanding your Fluoro Toolbox**

- Reagents with highest purity standard
- Ready-to-use
- Many known synthetic protocols
- AB253740 | CAS 373-68-2 | Tetramethylammonium fluoride; anhydrous
- AB144561 | CAS 220405-40-3 | 2,2-Difluoro-1,3-dimethylimidazolidine; 96%
- AB105806 | CAS 3872-23-9 | Trifluoromethylthio copper(I); 95%
- AB400262 | CAS 811-68-7 | Silver(I) trifluoromethanethiolate; 97%





## Gute Chemie – abcr service lab

Fluorinated compounds in material science

## for special requirements

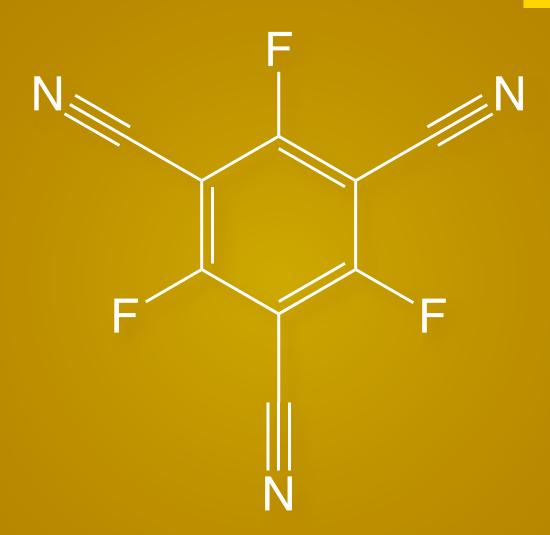


#### Development of CVD materials – for example:

- AB253713 | CAS 3345-29-7 | 1,1,2,2,9,9,10,10-Octafluoro[2.2]paracyclophane (AF4 dimer); 98%
- R&D units: 1g 5g
- Larger quantities upon request
- For CVD processes in e.g. aerospace, automotive, medical and electronic applications







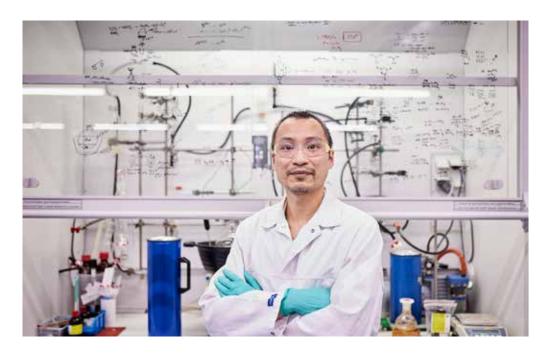
Gute Chemie – abcr service lab Electron-deficient building blocks

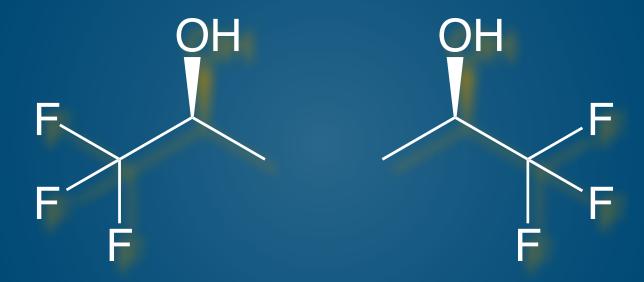
## to fullfil complex tasks



#### Design of highly electron-deficient material – for example:

- AB400270 | CAS 3638-97-9 | 2,4,6-Trifluorobenzene-1,3,5-tricarbonitrile; 97%
- R&D units: 250 mg 1 g
- Larger quantities upon request
- Building blocks for e.g. organic electronics





# Gute Chemie – abcr service lab Chiral compounds for pharma application

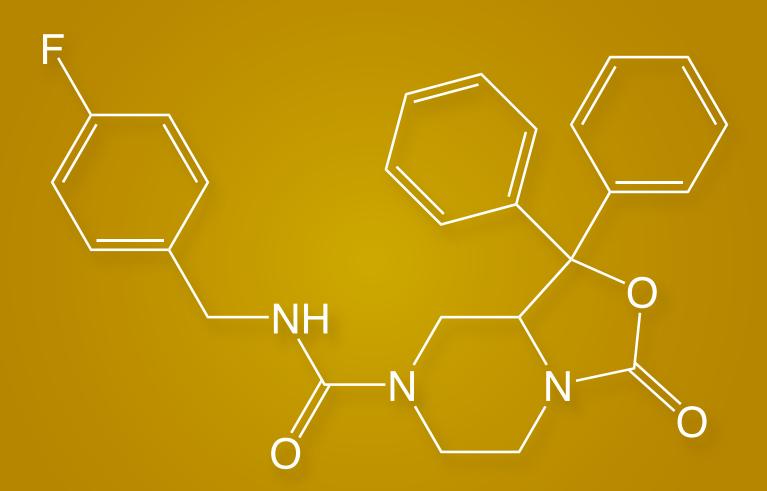
## with highest quality standards



#### Chiral fluorinated compounds – for example:

- AB289960 | CAS 17628-73-8 | (R)-1,1,1-Trifluoroisopropanol; 97%, ee 98%
- AB289961 | CAS 13539-97-7 | (S)-1,1,1-Trifluoroisopropanol; 97%, ee 98%
- Both enantiomers in highest quality available
- R&D units: 1g 5g
- Larger quantities upon request
- Fluorinated building blocks for e.g. pharmaceutical applications





Gute Chemie – abcr service lab Reference materials

## for step-by-step support



#### Fluorinated APIs – for example:

- AB401024 | CAS 847553-89-3 | N-[(4-Fluorophenyl)methyl]tetrahydro-3-oxo-1,1-diphenyl-3H-oxazolo[3,4-a]pyrazine-7(1H)-carboxamide; 95%
- Analog of pharmacological active lead structure
- Design of additional reference materials for versatile applications in diverse industries





## Gute Chemie – abcr service lab

Fluorinated silanes for surface technology

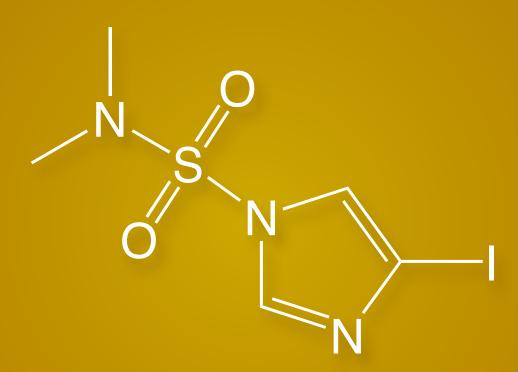
### for innovative solutions



#### Aromatic fluorinated silanes – for example:

- AB568517 | CAS 1675222-60-2 | 1,2,3,4,5-Pentafluoro-6-[3-(triethoxysilyl)propyl]-benzene; 95%
- R&D units: 2.5g 25g
- Larger quantities upon request
- Silanes and silicones for surface technology





# Gute Chemie – abcr service lab Protected building blocks

## for tailor-made synthesis

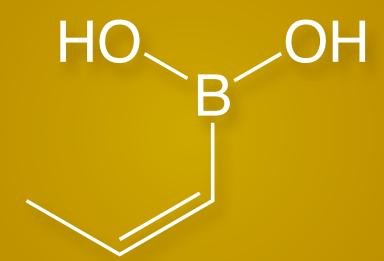


#### Development of protected building blocks – for example:

- AB150342 | CAS 135773-25-0 | N,N-Dimethyl 4-iodo-1H-imidazole-1-sulfonamide; 98%
- R&D units: 250 mg 5g
- Larger quantities upon request
- Building blocks in total synthesis of peptide antibiotic







Gute Chemie – abcr service lab Unusual boronic acids

## for creative synthesis approaches

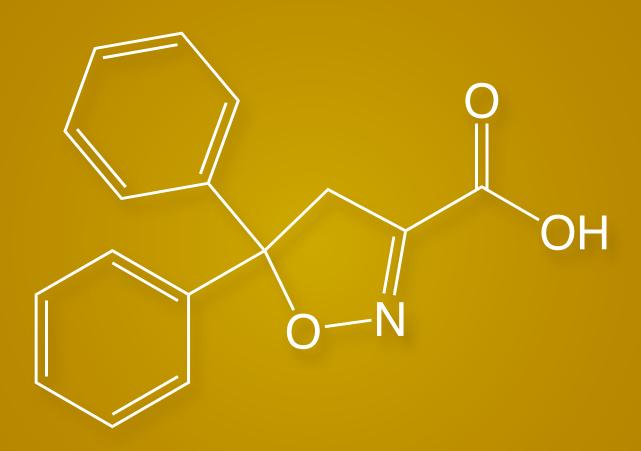


#### Boronic acids as versatile building blocks – for example:

- AB393661 | CAS 7547-96-8 | cis-Propenylboronic acid; 95%
- R&D units: 1g
- Larger quantities upon request
- Building blocks with specific configuration and high diastereomeric purity







Gute Chemie – abcr service lab Reference materials

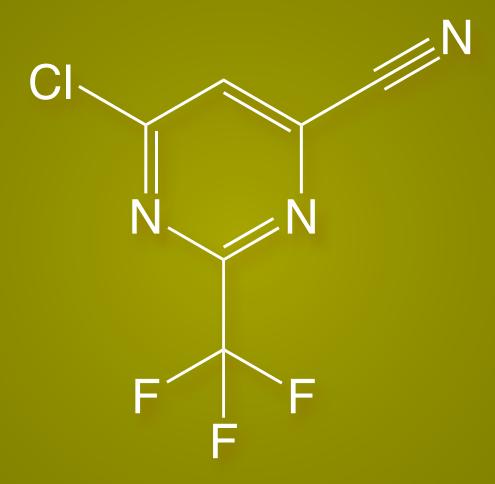
## your extended workbench



#### Metabolite of known herbicide – for example:

- AB567672 | CAS 209866-92-2 | 5,5-Diphenyl-4,5-dihydro-1,2-oxazole-3-carboxylic acid; 97% // Isoxadifen
- R&D units: 1g 5g
- Larger quantities upon request





# Gute Chemie – abcr service lab Functional heteroaromatic compounds

## for feasibility studies



#### Development of unique building blocks – for example:

- AB566994 | CAS 2322702-93-0 | 6-Chloro-2-(trifluoromethyl)-4-pyrimidinecarbonitrile; 98%
- R&D units: 1g
- Larger quantities upon request
- Building blocks for e.g. organic electronics





Gute Chemie – abcr service lab Difluoromethylated building blocks

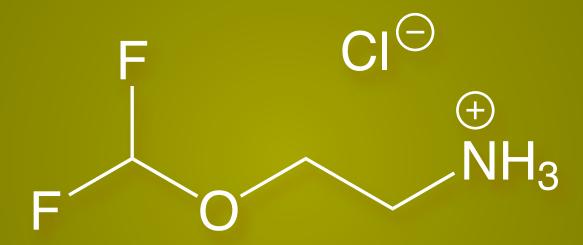
## for synthesis route optimization



#### Redesign of known syntheses – for example:

- AB491404 | CAS 1805019-80-0 | 5-Bromo-2-(difluoromethyl)-3-methylpyridine; 95%
- Building blocks for e.g. crop protection





# Gute Chemie – abcr service lab Aliphatic difluoromethoxylated compounds

## for state-of-the-art technology



#### Syntheses of sensitive compounds – for example:

- AB573394 | CAS 1980026-17-2 | 2-(Difluoromethoxy)ethan-1-amine hydrochloride; 95%
- Building blocks for e.g. cancer drug leads

