

Table 1. Partial List of Organic Functional Groups Solved by CQM.

Continuous-chain alkanes	Carboxylic acid halides	Pyrrole
Branched alkanes	Carboxylic acid anhydrides	Furan
Alkenes	Nitriles	Thiophene
Branched alkenes	Thiols	Imidazole
Alkynes	Sulfides	Pyridine
Alkyl fluorides	Disulfides	Pyrimidine
Alkyl chlorides	Sulfoxides	Pyrazine
Alkyl bromides	Sulfones	Quinoline
Alkyl iodides	Sulfites	Isoquinoline
Alkenyl halides	Sulfates	Indole
Aryl halides	Nitroalkanes	Adenine
Alcohols	Alkyl nitrates	Fullerene (C ₆₀)
Ethers	Alkyl nitrites	Graphite
Primary amines	Conjugated alkenes	Alkali Hydrides
Secondary amines	Conjugated polyenes	Alkali Metals
Tertiary amines	Aromatics	Silanes
Aldehydes	Napthalene	Boron
Ketones	Toluene	Aloxy boranes
Carboxylic acids	Chlorobenzene	Alkyl borinic acids
Carboxylic acid esters	Phenol	Alkyl boranes
Amides	Aniline	Tertiary N-borane
N-alkyl amides	Aryl nitro compounds	Quaternary N-borane
N,N-dialkyl amides	Benzoic acid compounds	Halido boranes
Urea	Anisole	Alkyl aluminum Hydrides