

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341090238 A

(19) INDIA

(22) Date of filing of Application :30/12/2023

(43) Publication Date : 26/01/2024

(54) Title of the invention : CHEMOSELECTIVE CLICK REACTIONS FOR SYNTHESIS OF ORGANIC COMPOUNDS

(51) International classification :C07K0001040000, C09K0011060000, B01J0019000000, C07B0059000000, H05B0033140000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

[058] The invention relates to the field of chemoselective click reactions for precise and efficient organic compound synthesis. This innovation encompasses methods, apparatuses, catalyst systems, computer-implemented automation, reagent compositions, kits, pharmaceutical compositions, materials production processes, environmentally friendly synthesis methods, and agrochemical formulations. These inventions collectively address the longstanding challenge of selectively modifying specific functional groups within complex organic compounds while leaving others untouched. By achieving this high degree of chemoselectivity, the invention enhances the precision, efficiency, and sustainability of chemical synthesis processes, with applications spanning pharmaceuticals, materials science, agriculture, and beyond. Additionally, the computer-implemented automation facilitates the rapid design and execution of chemoselective reactions, further advancing the field of organic chemistry.

No. of Pages : 24 No. of Claims : 10