

Supporting Information

Reversed Controlled Polymerization (RCP): Depolymerization from Well-defined Polymers to Monomers

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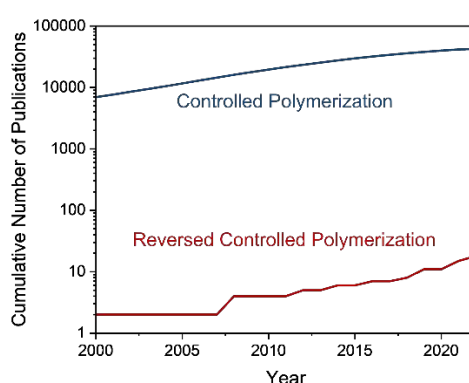


Figure 1: A comparison between the numbers of publications on controlled polymerization vs. depolymerization since the year 2000.

The data from figure 1 was obtained using Web of Science™. The following search terms were used:

For Cationic: "cationic polymerization"

For Anionic: "anionic polymerization"

For GTP: "Group transfer polymerization"

For NMP: "Nitroxide-mediated radical polymerization", "Nitroxide mediated radical polymerization", "Nitroxide-mediated polymerization"

For ATRP: "Atom transfer radical polymerization", "Copper-Mediated Living Polymerization", "Cu (0)-mediated living radical polymerization", "Copper-Mediated Living Radical Polymerization", SET-LRP

For RAFT: "Reversible addition-fragmentation chain-transfer polymerization", "Reversible addition fragmentation chain transfer polymerization", "RAFT polymerization", "PET-RAFT"

For ITP: "Iodine Transfer Polymerization", "Reversible complexation mediated polymerization", "Halogen-bonding-catalyzed living radical polymeriza", "Reversible Complexation Mediated Living Radical Polymerization"

For ROMP: "Ring-opening metathesis polymerisation", "ROMP"

For OMRP: "organometallic-mediated polymerization", "cobalt mediated radical polymerization", "cobalt-mediated radical polymerization"

Results were categorized by year, with all publications prior to the year 2000 being included within that year.

For Controlled Polymerization:

| Year | Anionic | Cationic | GTP | NMP | ATRP | RAFT | ITP | ROMP | OMRP |
|------|---------|----------|-----|-----|------|------|-----|------|------|
| 2000 | 2786 | 2866 | 349 | 9 | 532 | 7 | 3 | 404 | 4 |
| 2001 | 218 | 197 | 20 | 12 | 184 | 12 | 1 | 57 | 2 |
| 2002 | 213 | 171 | 15 | 14 | 272 | 36 | 1 | 126 | 2 |
| 2003 | 204 | 180 | 13 | 29 | 284 | 61 | 2 | 90 | 4 |
| 2004 | 223 | 214 | 17 | 30 | 369 | 106 | 2 | 73 | 2 |
| 2005 | 222 | 179 | 13 | 42 | 478 | 163 | 4 | 83 | 9 |
| 2006 | 266 | 187 | 17 | 69 | 492 | 204 | 7 | 105 | 9 |
| 2007 | 226 | 208 | 16 | 76 | 543 | 260 | 7 | 128 | 8 |
| 2008 | 250 | 186 | 18 | 94 | 639 | 288 | 10 | 126 | 10 |
| 2009 | 251 | 191 | 16 | 82 | 672 | 342 | 14 | 146 | 22 |
| 2010 | 220 | 227 | 15 | 91 | 633 | 380 | 10 | 159 | 17 |
| 2011 | 240 | 177 | 16 | 89 | 803 | 424 | 19 | 128 | 12 |
| 2012 | 211 | 192 | 25 | 86 | 785 | 468 | 19 | 139 | 18 |
| 2013 | 221 | 230 | 12 | 68 | 751 | 522 | 13 | 150 | 14 |
| 2014 | 221 | 199 | 18 | 58 | 841 | 647 | 11 | 154 | 19 |
| 2015 | 241 | 213 | 30 | 71 | 784 | 660 | 8 | 193 | 18 |
| 2016 | 238 | 194 | 22 | 84 | 679 | 686 | 16 | 168 | 20 |
| 2017 | 216 | 200 | 10 | 74 | 660 | 702 | 10 | 172 | 17 |
| 2018 | 190 | 198 | 15 | 45 | 650 | 655 | 20 | 176 | 17 |
| 2019 | 223 | 222 | 11 | 50 | 628 | 680 | 16 | 185 | 17 |
| 2020 | 200 | 198 | 18 | 59 | 530 | 626 | 15 | 157 | 13 |
| 2021 | 169 | 193 | 14 | 45 | 453 | 619 | 15 | 163 | 15 |
| 2022 | 98 | 133 | 9 | 27 | 279 | 433 | 8 | 95 | 5 |

For depolymerization:

| Year | Anionic | Cationic | GTP | NMP | ATRP | RAFT | ITP | ROMP | OMRP |
|------|---------|----------|-----|-----|------|------|-----|------|------|
| 2000 | 1 | 1 | | | | | | | |
| 2001 | | | | | | | | | |
| 2002 | | | | | | | | | |
| 2003 | | | | | | | | | |
| 2004 | | | | | | | | | |
| 2005 | | | | | | | | | |
| 2006 | | | | | | | | | |
| 2007 | | | | | | | | | |
| 2008 | 1 | 1 | | | | | | | |
| 2009 | | | | | | | | | |
| 2010 | | | | | | | | | |
| 2011 | | | | | | | | | |
| 2012 | | | | | 1 | | | | |
| 2013 | | | | | | | | | |
| 2014 | | | | | 1 | | | | |
| 2015 | | | | | | | | | |
| 2016 | | | | | 1 | | | | |
| 2017 | | | | | | | | | |
| 2018 | | | | | | 1 | | | |
| 2019 | | 1 | | | 1 | | | 1 | |
| 2020 | | | | | | | | | |
| 2021 | | | | | 2 | 1 | | 1 | |
| 2022 | | | | | 1 | 1 | 1 | | |