|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Entry | Monomer 1 |  | Monomer 2 |  | Polymer | Tg | Tm | Reference |
|  | ChemDraw | SMILES | ChemDraw | SMILES | type | (°C) | (TBC) |  |
| 1 |  | O1CC1 |  | C(=O)=O | polycarbonate | 10 |  | <https://pubs.rsc.org/en/content/articlelanding/2011/cc/c0cc02207a> |
| 2 |  | CC1OC1 |  | C(=O)=O | polycarbonate | 42 |  | <https://pubs.rsc.org/en/content/articlelanding/2011/cc/c0cc02207a> |
| 3 |  | CCC1OC1 |  | C(=O)=O | polycarbonate | 9 |  | <https://pubs.rsc.org/en/content/articlelanding/2011/cc/c0cc02207a> |
| 4 |  | [C@H]12O[C@H]1CCCC2 |  | C(=O)=O | polycarbonate | 118 |  | <https://pubs.rsc.org/en/content/articlelanding/2011/cc/c0cc02207a> |
| 5 |  | [C@H]12O[C@H]1C3=C(C=CC=C3)C2 |  | C(=O)=O | polycarbonate | 134 |  | <https://pubs.acs.org/doi/10.1021/ja208711c> |
| 6 |  | CC12OC1C[C@H](C(C)=C)CC2 |  | C(=O)=O | polycarbonate | 111 |  | <https://pubs.rsc.org/en/content/articlelanding/2011/cc/c0cc02207a#cit154> |
| 7 |  | C1(C2=CC=CC=C2)OC1 |  | C(=O)=O | polycarbonate | 80 |  | <https://pubs.acs.org/doi/10.1021/ja208711c> |
| 8 |  | ClCC1OC1 |  | C(=O)=O | polycarbonate | 31 |  | <https://pubs.acs.org/doi/10.1021/ja208711c> |
| 9 |  | C[C@]12O[C@H]1C[C@@H](C(C)=C)CC2 |  | C(=O)=O | polycarbonate | 122 |  | <https://pubs.acs.org/doi/10.1021/acs.macromol.5b00157> |
| 10 |  | O=C1OCCCO1 |  |  | polycarbonate | -25 |  | <https://pubs.rsc.org/en/content/articlelanding/2017/py/c7py00236j> |
| 11 |  | O=C1OC[C@@H]2[C@@H](C[C@@H](OC)O2)O1 |  |  | polycarbonate | 58 |  | <https://pubs.rsc.org/en/content/articlelanding/2017/py/c7py00236j> |
| 12 |  | O=C1OC[C@@H]2[C@@H]([C@@H](OC(C)(C)O3)[C@@H]3O2)O1 |  |  | polycarbonate | 125 |  | <https://pubs.rsc.org/en/content/articlelanding/2021/py/d1py00784j> |
| 13 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | C(=O)=O | polycarbonate | 121 |  | <https://pubs.rsc.org/en/content/articlelanding/2021/py/d1py00784j> |
| 14 |  | O=C1OC[C@@H]2[C@@H](C[C@H](N(C=C3C)C(N(C)C3=O)=O)O2)O1 |  |  | polycarbonate | 156 |  | <https://pubs.rsc.org/en/content/articlelanding/2021/py/d1py00784j> |
| 15 |  | O=C1OC[C@@H]2[C@H]([C@H](OC(C)(C)O3)[C@H]3[C@@H](OC)O2)O1 |  |  | polycarbonate | 152 |  | <https://pubs.acs.org/doi/10.1021/acs.macromol.6b01492> |
| 16 |  | O=C1OC[C@@H]2[C@H](C=C[C@@H](OC(C)C)O2)O1 |  |  | polycarbonate | 69 |  | <https://pubs.acs.org/doi/10.1021/acsmacrolett.7b00362> |
| 17 |  | O=C1OC[C@@H]2[C@H]([C@H](OC)[C@@H](OC)[C@@H](OC)O2)O1 |  |  | polycarbonate | 122 |  | <https://pubs.acs.org/doi/10.1021/ja402319m> |
| 18 |  | CO[C@@H]1[C@@H]2[C@H](OC(O2)=O)[C@@H]3OC(C4=CC=CC=C4)OC[C@H]3O1 |  |  | polycarbonate | 233 |  | <https://pubs.acs.org/doi/10.1021/acs.macromol.7b01785> |
| 19 |  | O[C@@H]([C@@H](OC(O1)=O)[C@H]1[C@@H](OC)O2)[C@H]2CO |  |  | polycarbonate | 158 |  | <https://pubs.acs.org/doi/10.1021/acs.macromol.7b01785> |
| 20 |  | CO[C@@H](O1)[C@@H]2[C@H](OC(O2)=O)[C@@H]([C@H]1COC(C)=O)OC(C)=O |  |  | polycarbonate | 156 |  | <https://pubs.acs.org/doi/10.1021/acs.macromol.7b01785> |
| 21 |  | O=C1OC[C@@H]2[C@H]([C@H](OC(OCC)=O)[C@@H](OC(OCC)=O)[C@@H](OC)O2)O1 |  |  | polycarbonate | 120 |  | <https://pubs.acs.org/doi/pdf/10.1021/jacs.8b10675> |
| 22 |  | O=C1OC[C@@H]2[C@H]([C@H](OC(OCCCC)=O)[C@@H](OC(OCCCC)=O)[C@@H](OC)O2)O1 |  |  | polycarbonate | 68 |  | <https://pubs.acs.org/doi/pdf/10.1021/jacs.8b10675> |
| 23 |  | O=C1OC[C@@H]2[C@H]([C@H](OC(OCCCCCC)=O)[C@@H](OC(OCCCCCC)=O)[C@@H](OC)O2)O1 |  |  | polycarbonate | 46 |  | <https://pubs.acs.org/doi/pdf/10.1021/jacs.8b10675> |
| 24 |  | O=C1OC[C@@H]2[C@H]([C@H](OC(OCC(C)C)=O)[C@@H](OC(OCC(C)C)=O)[C@@H](OC)O2)O1 |  |  | polycarbonate | 85 |  | <https://pubs.acs.org/doi/pdf/10.1021/jacs.8b10675> |
| 25 |  | O=C1OC[C@@H]2[C@H]([C@H](OC(OCC(C)(C)C)=O)[C@@H](OC(OCC(C)(C)C)=O)[C@@H](OC)O2)O1 |  |  | polycarbonate | 125 |  | <https://pubs.acs.org/doi/pdf/10.1021/jacs.8b10675> |
| 26 |  | O=C1OC[C@@H]2[C@H]([C@H](OC(OCC(CCCC)CC)=O)[C@@H](OC(OCC(CCCC)CC)=O)[C@@H](OC)O2)O1 |  |  | polycarbonate | 38 |  | <https://pubs.acs.org/doi/pdf/10.1021/jacs.8b10675> |
| 27 |  | O=C1OCC=CCO1 |  |  | polycarbonate | -24 | 115 | <https://pubs.acs.org/doi/full/10.1021/jacs.9b06259> |
| 28 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  |  | polyether | 131 | 271 | <https://onlinelibrary.wiley.com/doi/full/10.1002/anie.202013562> |
| 29 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | CC1(C)O[C@H]2[C@H]3[C@H](CO3)O[C@H]2O1 | polyether | 128 |  | <https://onlinelibrary.wiley.com/doi/full/10.1002/anie.202013562> |
| 30 |  | CC1(C)O[C@@H]2[C@@H](OCC=C)[C@@H](COCC=C)O[C@@H]2O1 |  |  | polyether | 14 |  | <https://pubs.acs.org/doi/pdf/10.1021/acsapm.1c01095> |
| 31 |  | CC1(C)O[C@@H]2[C@@H](OCCCC=C)[C@@H](COCCCC=C)O[C@@H]2O1 |  |  | polyether | 0 |  | <https://pubs.acs.org/doi/pdf/10.1021/acsapm.1c01095> |
| 32 |  | CC1(C)O[C@@H]2[C@@H](OCCCCCCCCCC=C)[C@@H](COCCCCCCCCCC=C)O[C@@H]2O1 |  |  | polyether | -32 |  | <https://pubs.acs.org/doi/pdf/10.1021/acsapm.1c01095> |
| 33 |  | CC1(C)O[C@@H]2[C@@H](OC(C=C)=O)[C@@H](COC(C=C)=O)O[C@@H]2O1 |  |  | Polyester | 45 |  | <https://pubs.acs.org/doi/pdf/10.1021/acsapm.1c01095> |
| 34 |  | CC1(C)O[C@@H]2[C@@H](OC(CCC=C)=O)[C@@H](COC(CCC=C)=O)O[C@@H]2O1 |  |  | Polyester | 36 |  | <https://pubs.acs.org/doi/pdf/10.1021/acsapm.1c01095> |
| 35 |  | CC1(C)O[C@@H]2[C@@H](OC(CCCCCCCCC=C)=O)[C@@H](COC(CCCCCCCCC=C)=O)O[C@@H]2O1 |  |  | Polyester | -14 |  | <https://pubs.acs.org/doi/pdf/10.1021/acsapm.1c01095> |
| 36 |  | O[C@@H]1[C@@H](OC(CCCCCCCCC=C)=O)[C@@H](COC(CCCCCCCCC=C)=O)O[C@@H]1O |  |  | Polyester | - | 48 | <https://pubs.rsc.org/en/content/articlelanding/2020/py/c9py01809c> |
| 37 |  | C=CCCCCCCCCC(OC[C@@H]1[C@H]([C@H](OC(C)(C)O2)[C@H]2[C@@H](OC)O1)OC(CCCCCCCCC=C)=O)=O |  |  | Polyester | -19 |  | <https://pubs.rsc.org/en/content/articlelanding/2020/py/c9py01809c> |
| 38 |  | C=CCCCCCCCCC(OC[C@@H]1[C@H]([C@H](O)[C@H](O)[C@@H](OC)O1)OC(CCCCCCCCC=C)=O)=O |  |  | Polyester | -10 | 49 | <https://pubs.rsc.org/en/content/articlelanding/2020/py/c9py01809c> |
| 39 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | O=C1C(C=CC=C2)=C2C(O1)=O | Polyester | 145 |  | <https://pubs.acs.org/doi/full/10.1021/acs.macromol.1c00365> |
| 40 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | O=C1C(C=C(C)C=C2)=C2C(O1)=O | Polyester | 138 |  | <https://pubs.acs.org/doi/full/10.1021/acs.macromol.1c00365> |
| 41 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | O=C(O1)CCCC1=O | Polyester | 60 | 81 | <https://pubs.acs.org/doi/full/10.1021/acs.macromol.1c00365> |
| 42 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | O=C(O1)COCC1=O | Polyester | 80 |  | <https://pubs.acs.org/doi/full/10.1021/acs.macromol.1c00365> |
| 43 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | O=C(O1)[C@@]2([H])[C@@]([C@H]3C=C[C@@H]2CC3)([H])C1=O | Polyester |  |  | <https://pubs.acs.org/doi/full/10.1021/acs.macromol.1c00365> |
| 44 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | O=C(O1)[C@@]2([H])[C@@]([C@H]3C=C[C@@H]2C3)([H])C1=O | Polyester |  |  | <https://pubs.acs.org/doi/full/10.1021/acs.macromol.1c00365> |
| 45 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | O=C1OC(C(C=CC=C2)=C2C3=C1C=CC=C3)=O | Polyester |  |  | <https://pubs.acs.org/doi/full/10.1021/acs.macromol.1c00365> |
| 46 |  | CC1(C)O[C@@H]2[C@@H]3[C@@H](CO3)O[C@@H]2O1 |  | C(=S)=S | Poly(thiono-alt-trithiocarboante) | 114 |  | <https://pubs.rsc.org/en/content/articlelanding/2021/py/d1py00753j#cit27> |
| 47 |  | S=C1SC[C@@H]2[C@@H]([C@@H](OC(C)(C)O3)[C@@H]3O2)O1 |  |  | Poly(thiono-alt-trithiocarboante) | 114 |  | <https://pubs.rsc.org/en/content/articlelanding/2021/py/d1py00753j#cit27> |
| 48 |  | S=C1SC[C@@H]2[C@H](C=CCO2)O1 |  |  | Poly(thiono-alt-trithiocarboante) | 65 |  | Unpublished data |
| 49 |  | S=C1SC[C@@H]2[C@H](CCCO2)O1 |  |  | Poly(thiono-alt-trithiocarboante) | 78 | 105 | Unpublished data |
| 50 |  |  |  |  |  |  |  |  |

Notes:

* Polycondensation paper to consider: <https://pubs.acs.org/doi/10.1021/acs.macromol.6b00591> but question of triphosgene monomer
* How to incorporate post-polymerisation modification that cannot be modelled as a “monomer”, e.g. hydrogenated polymers in <https://pubs.acs.org/doi/pdf/10.1021/acsapm.1c01095> ?