

## Supplementary Information

### Sources, sinks, and cycling of dissolved organic copper binding ligands in the ocean

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### Keywords

Organic ligands, dissolved copper, copper-binding ligands, dissolved organic carbon, trace metals

### Supplementary Table 1

Dissolved organic carbon (DOC) and ligand data ( $L_1$ ) from which the ligand vs DOC relationship was derived for calculating the global riverine flux of copper-binding ligands to the oceans.

| <b>[DOC]</b><br><b><math>\mu\text{M}</math></b> | <b>[<math>L_1</math>]</b><br><b><math>\text{nmol L}^{-1}</math></b> | <b>[<math>L_1</math>]/[DOC] mmol</b><br><b>Cu mol C<sup>-1</sup></b> | <b>Reference</b>            |
|---|---|--|-----------------------------|
| 163   | 3.36  | 0.021  | Muller and Batchelli (2013) |
| 84  | 1.8   | 0.021  | Muller and Batchelli (2013) |
| 80.6  | 1.75  | 0.022  | Muller and Batchelli (2013) |
| 78.6  | 0.81  | 0.010  | Muller and Batchelli (2013) |
| 676.5   | 3.63  | 0.005  | Muller and Batchelli (2013) |
| 312.9   | 1.51  | 0.005  | Muller and Batchelli (2013) |
| 268.9   | 0.8   | 0.003  | Muller and Batchelli (2013) |
| 114.5   | 0.7   | 0.006  | Muller and Batchelli (2013) |
|   |   | 0.490  | Hoffman et al. 2007         |
|   |   | 0.960  | Hoffman et al. 2007         |
|   |   | 0.390  | Hoffman et al. 2007         |
|   |   | 0.890  | Hoffman et al. 2007         |
| 202   | 11  | 0.054  | Shank et al (2004)          |
| 564   | 120   | 0.213  | Shank et al (2004)          |
| 783   | 176   | 0.225  | Shank et al (2004)          |
| 248   | 16  | 0.065  | Shank et al (2004)          |
| 518   | 105   | 0.203  | Shank et al (2004)          |
| 762   | 155   | 0.203  | Shank et al (2004)          |
| 214   | 24  | 0.112  | Shank et al (2004)          |
| 416   | 53  | 0.127  | Shank et al (2004)          |
| 700   | 114   | 0.163  | Shank et al (2004)          |
| 867   | 160   | 0.185  | Shank et al (2004)          |
| 352   | 36  | 0.102  | Shank et al (2004)          |
| 648   | 110   | 0.170  | Shank et al (2004)          |
| 976   | 229   | 0.235  | Shank et al (2004)          |
| 242   | 12  | 0.050  | Shank et al (2004)          |
| 526   | 69  | 0.131  | Shank et al (2004)          |
| 782   | 178   | 0.228  | Shank et al (2004)          |
| 278   | 20  | 0.072  | Shank et al (2004)          |