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**Supporting Information**

**Table SI.I**

Physical parameters and seawater composition at shallow-water hydrothermal vent sites in the Azores.

*Parâmetros físicos e composição da água do mar em fontes hidrotermais de superfície nos Açores.*

|                          | D. João de Castro Bank | Lajedo | Espalamaca | Carapacho | Varadouro | Mosteiros (Beach) | Ferraria | Ribeira Quente (Lobeira) | Ribeira Quente (Beach) | Porto Formoso |
|--------------------------|------------------------|--------|------------|-----------|-----------|-------------------|----------|--------------------------|------------------------|---------------|
| Temperature (°C)         | 26.5-121               | 23.8   | 29         | 60        | 41        | 40                | 20.4-81  | 20-112                   | 20-82                  | 17.1-23.3     |
| pH                       | 4.12-7                 | 8.29   | 7          | 7         | 6.5       | 7                 | 5-8.5    | 5-6                      | 5-7.8                  | 5.5-7.8       |
| TDS (mg/L)               |                        |        |            |           |           |                   | 85440.00 |                          |                        |               |
| Conductivity (µs/cm)     |                        |        |            |           |           |                   | 4220     |                          |                        |               |
| Alkalinity (mg/L)        |                        |        |            |           |           |                   | 454.0    |                          |                        |               |
| Salinity (‰)             | 36.13                  | 36.14  | 36.17      | 36.14     | 36.17     |                   | 21-36.8  |                          | 21-30                  | 30.4-37.6     |
| Dissolved oxygen (mg/L)  | 5.29                   | 5.45   | 5.15       | 5.43      | 5.42      |                   | 25.05    |                          |                        |               |
| CO <sub>2</sub> L (mg/L) |                        |        |            |           |           |                   | 382.0    |                          |                        |               |
| NO <sub>3</sub> (mg/L)   | 0.2                    | 0.32   | 0.31       | 0.17      | 0.10      |                   | 0.17     |                          |                        |               |
| NO <sub>2</sub> (mg/L)   |                        |        |            |           |           |                   | 18.75    |                          |                        |               |



**Table SI.I (cont.)**

| Local                   | D. João de Castro Bank | Lajedo | Espalamaca | Carapacho | Varadouro | Mosteiros (Beach) | Ferraria | Ribeira Quente (Lobeira) | Ribeira Quente (Beach) | Porto Formoso |
|-------------------------|------------------------|--------|------------|-----------|-----------|-------------------|----------|--------------------------|------------------------|---------------|
| PO <sub>4</sub> (mg/L)  | 0.07                   | 0.09   | 0.05       | 0.13      | 0.10      |                   | 0.67     |                          |                        |               |
| SiO <sub>3</sub> (mg/L) | 0.40                   | 1.16   | 0.61       | 1.21      | 1.06      |                   |          |                          |                        |               |
| SiO <sub>2</sub> (mg/L) |                        |        |            |           |           |                   | 192.60   |                          |                        |               |
| Na (mg/L)               |                        |        |            |           |           |                   | 1000.00  |                          |                        |               |
| K (mg/L)                |                        |        |            |           |           |                   | 568.00   |                          |                        |               |
| Ca (mg/L)               |                        |        |            |           |           |                   | 500.00   |                          |                        |               |
| SO <sub>4</sub> (mg/L)  |                        |        |            |           |           |                   | 1814.00  |                          |                        |               |
| Cl (mg/L)               |                        |        |            |           |           |                   | 4009.40  |                          |                        |               |
| HCO <sub>3</sub> (mg/L) |                        |        |            |           |           |                   | 553.90   |                          |                        |               |
| S (μM)                  | 0-404                  |        |            |           |           |                   |          |                          |                        |               |
| Al (mg/L)               |                        |        |            |           |           |                   | 200      |                          |                        |               |
| As (mg/L)               |                        |        |            |           |           |                   | 0.21     |                          |                        |               |
| B (mg/L)                |                        |        |            |           |           |                   | 6800     |                          |                        |               |
| Br (mg/L)               |                        |        |            |           |           |                   | 14138    |                          |                        |               |
| Cr (mg/L)               |                        |        |            |           |           |                   | <50      |                          |                        |               |
| Hg (mg/L)               |                        |        |            |           |           |                   | <20      |                          |                        |               |
| Li (mg/L)               |                        |        |            |           |           |                   | 1300     |                          |                        |               |
| Ni (mg/L)               |                        |        |            |           |           |                   | 240      |                          |                        |               |
| Sr (mg/L)               |                        |        |            |           |           |                   | 12300    |                          |                        |               |
| Zn (mg/L)               |                        |        |            |           |           |                   | 80       |                          |                        |               |
| Cu (mg/L)               | 0.89-4.96              |        |            |           |           |                   | 160      |                          |                        |               |
| Pb (mg/L)               | 165.8-1220.5           |        |            |           |           |                   | 4        |                          |                        |               |
| Ba (mg/L)               | 2.75-83.77             |        |            |           |           |                   |          |                          |                        |               |
| Fe (mg/L)               | 223.38-<br>6478.02     |        |            |           |           |                   | 230      |                          |                        |               |
| Mn (mg/L)               | 5.49-707.60            |        |            |           |           |                   | 3020     |                          |                        |               |
| Co (mg/L)               | 1.77-2.95              |        |            |           |           |                   |          |                          |                        |               |
| Cd (mg/L)               | 0.56-0.67              |        |            |           |           |                   | <1       |                          |                        |               |

**Table SI.I (cont.)**

| Local      | D. João de Castro Bank   | Lajedo    | Espalamaca | Carapacho | Varadouro | Mosteiros (Beach) | Ferraria  | Ribeira Quente (Lobeira)  | Ribeira Quente (Beach)  | Porto Formoso   |   |
|------------|--|-----------|------------|-----------|-----------|-------------------|---|---|---|---|---|
| References | Cardigos, 2002;<br>Cardigos <i>et al.</i> , 2002; 2005;<br>Colaço <i>et al.</i> , 2006; MBL, 2009;<br>Raghukumar <i>et al.</i> , 2008;<br>Santos <i>et al.</i> , 1996; Sobrinho-Gonçalves & Cardigos, 2006 | MBL, 2009 | MBL, 2009  | MBL, 2009 | MBL, 2009 | MBL, 2009         | Aguiar, 1999; 2005;<br>Albuquerque <i>et al.</i> , 2002;<br>Carvalho <i>et al.</i> , 2009; 2011;<br>Cruz <i>et al.</i> , 2010; Freire, 2006; MBL, 2009; Moore <i>et al.</i> , 1995; Vedel & Depledge, 1995;<br>Wallenstein <i>et al.</i> , 2013 | Aguiar, 1999; 2005; Manaia & Costa, 1991; Manaia <i>et al.</i> , 1994; MBL, 2009; Zillig <i>et al.</i> , 1990 | Aguiar, 1999; 2005; Manaia & Costa, 1991; MBL, 2009; Nunes <i>et al.</i> , 1992 | Aguiar, 1999; 2005; Huber <i>et al.</i> , 1986; Manaia & Costa, 1991; MBL, 2009; Nunes <i>et al.</i> , 1992 | Couto <i>et al.</i> , 2010;<br>Wallenstein <i>et al.</i> , 2013 |