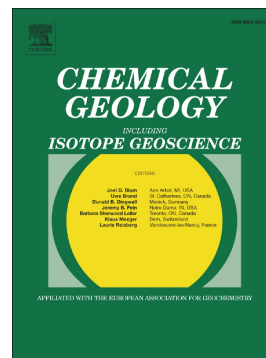


## Accepted Manuscript

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Preliminary validation and application

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## **Organically bound iodine as a bottom-water redox proxy: preliminary validation and application**

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**Key words: I/TOC, bottom water, OAE 2, black shale, Baltic**

### **Abstract:**

Carbonate-associated iodine (I/Ca) has been used as a proxy of local, upper-ocean redox conditions, and has successfully demonstrated highly dynamic spatial and temporal patterns across different time scales of Earth history. To further explore the utility of iodine as a paleo-environmental proxy, we present here a new method of extracting organically bound iodine ( $I_{org}$ ) from shale using volumes of samples on the order of tens of milligrams, thus offering the

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