

## Electronic Supplementary Information

### **A [3]Rotaxane Composed of a Zinc Porphyrin Tetra-substituted with Coordinating Macrocycles and of Two Short Rigid Axles**

**Cécile Roche, Jean-Pierre Sauvage, Angélique Sour, and Nathan L. Strutt**

#### **Contents**

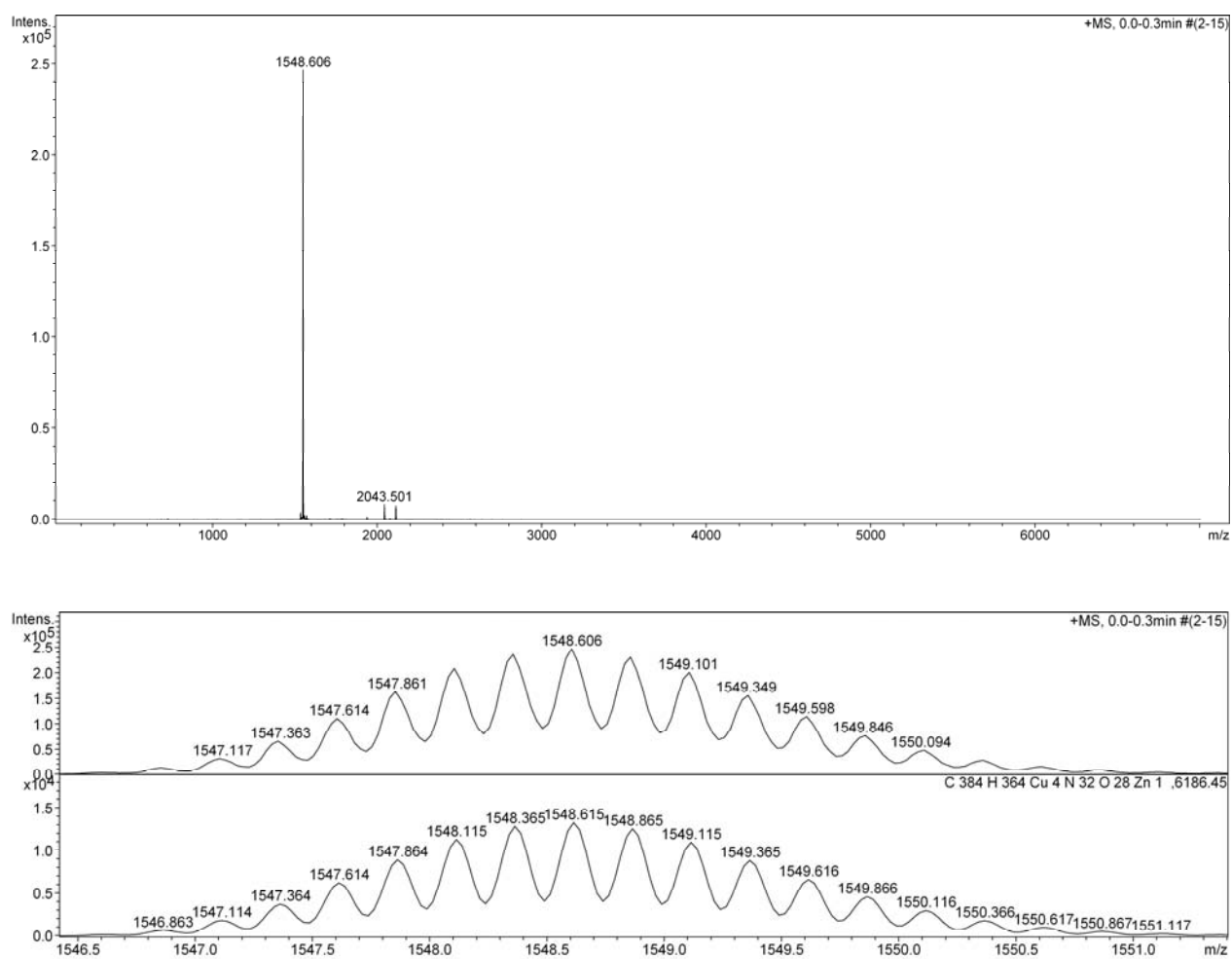
Figure S1: ES-MS spectrum of rotaxane **1**<sup>4+</sup>.

Figure S2: COSY spectrum of rotaxane **1**<sup>4+</sup> (aromatic region).

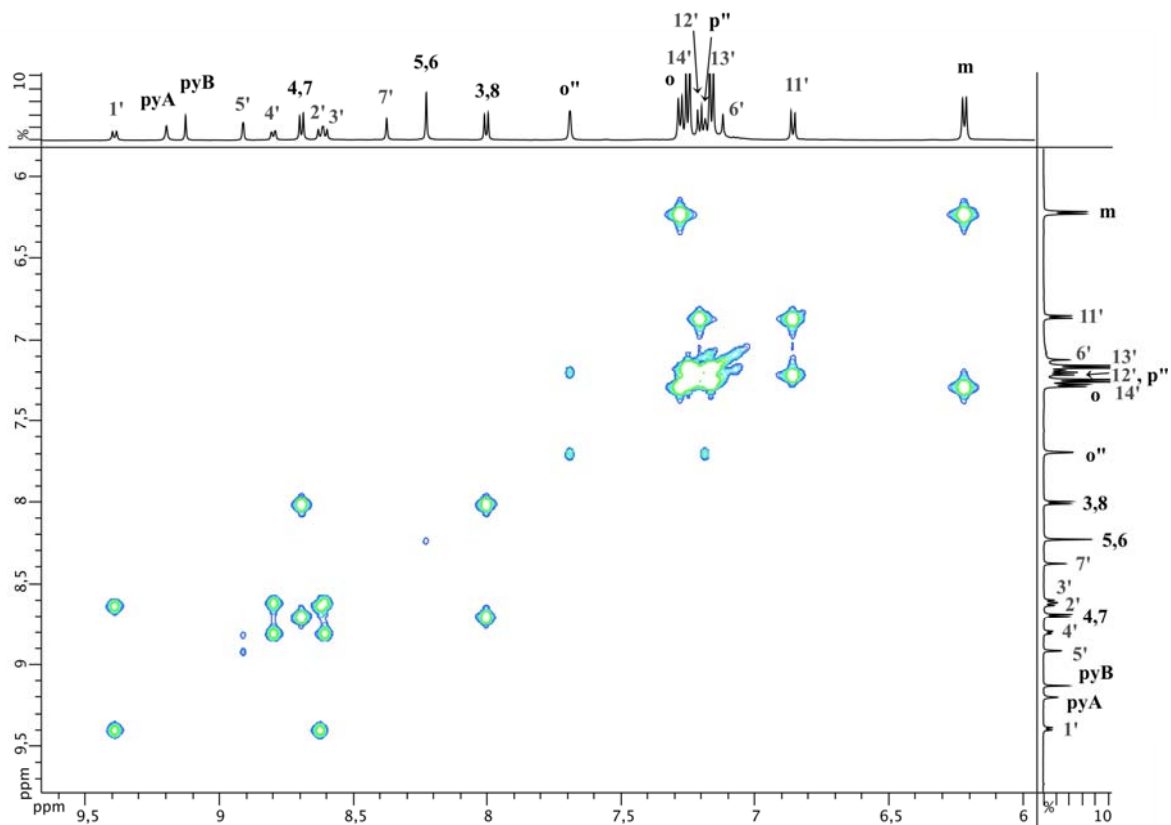
Figure S3: COSY spectrum of rotaxane **1**<sup>4+</sup> (aliphatic region).

Figure S4: NOESY spectrum of rotaxane **1**<sup>4+</sup> (aromatic region).

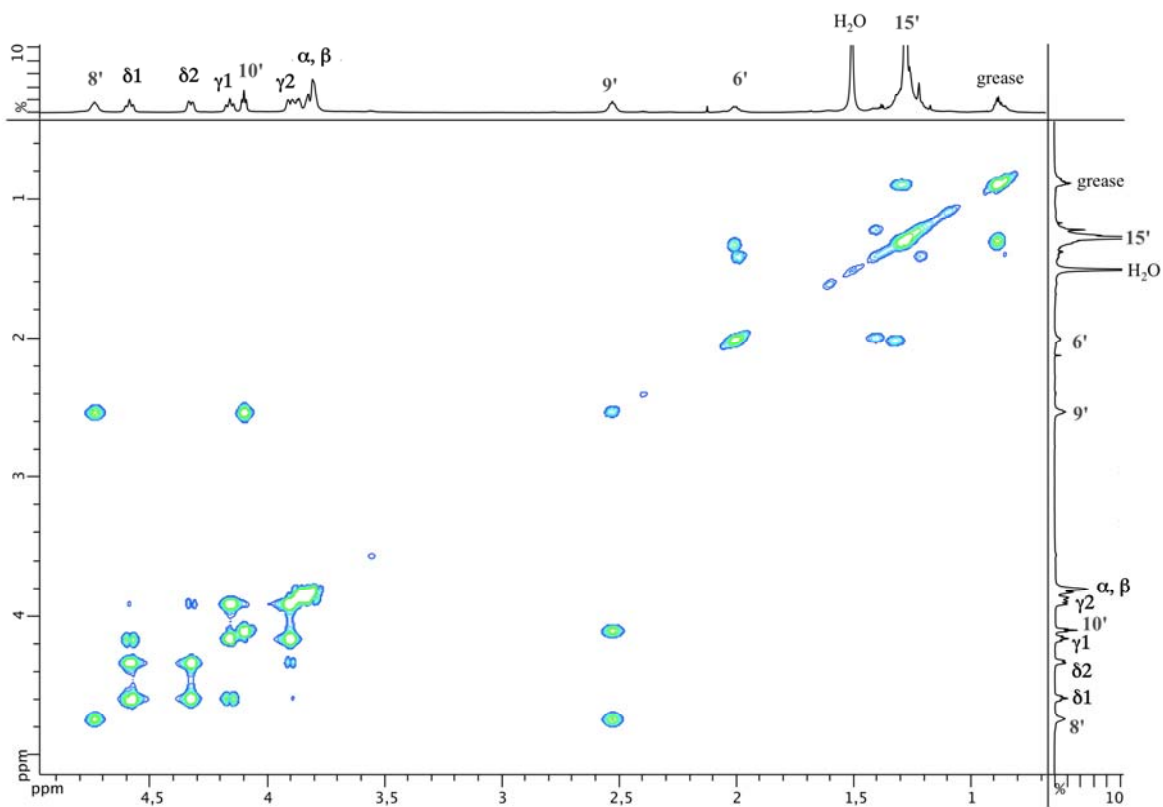
Figure S5: UV-visible absorption spectra of free-base porphyrin **3**, Zn-porphyrin **4** and rotaxane **1**<sup>4+</sup>.



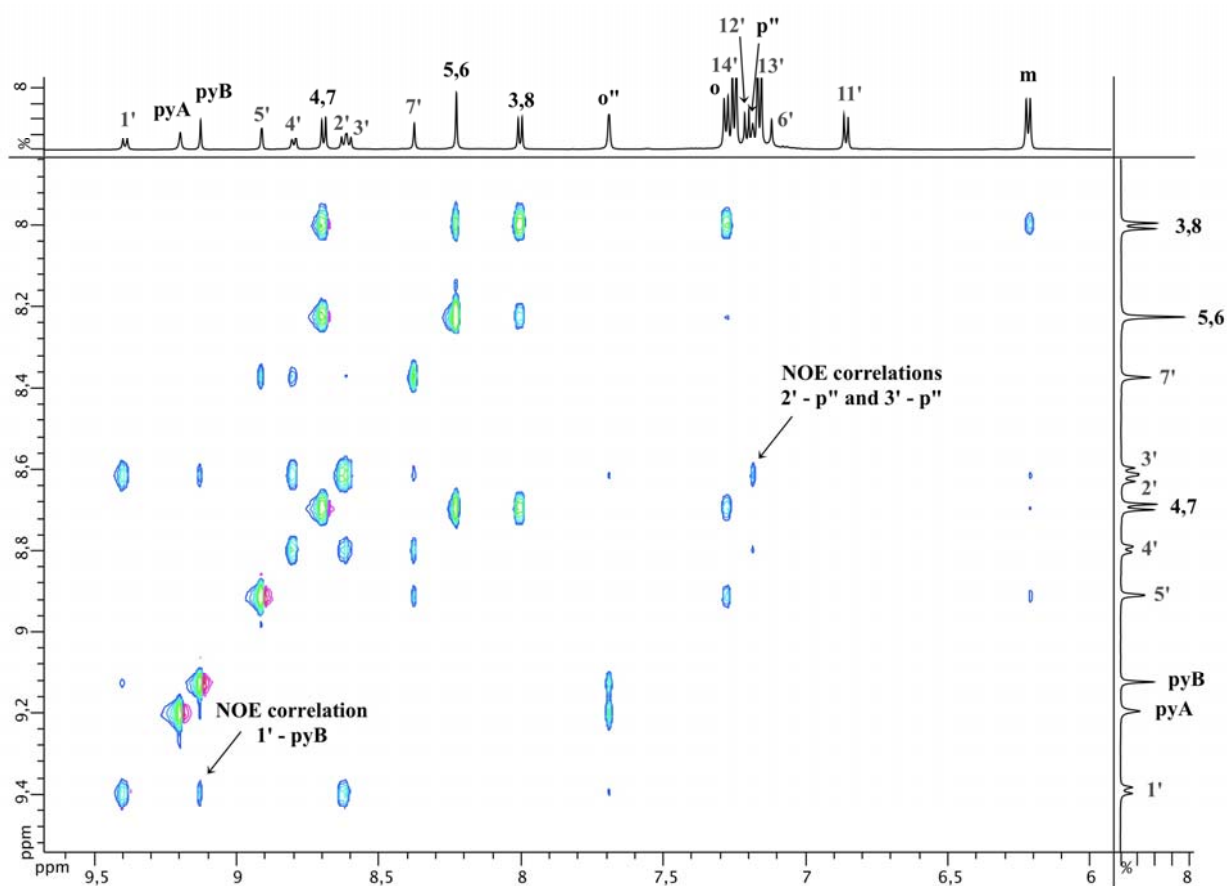
**Figure S1:** HRES-MS spectrum of rotaxane **1**<sup>4+</sup> (top) and the corresponding simulation (bottom).



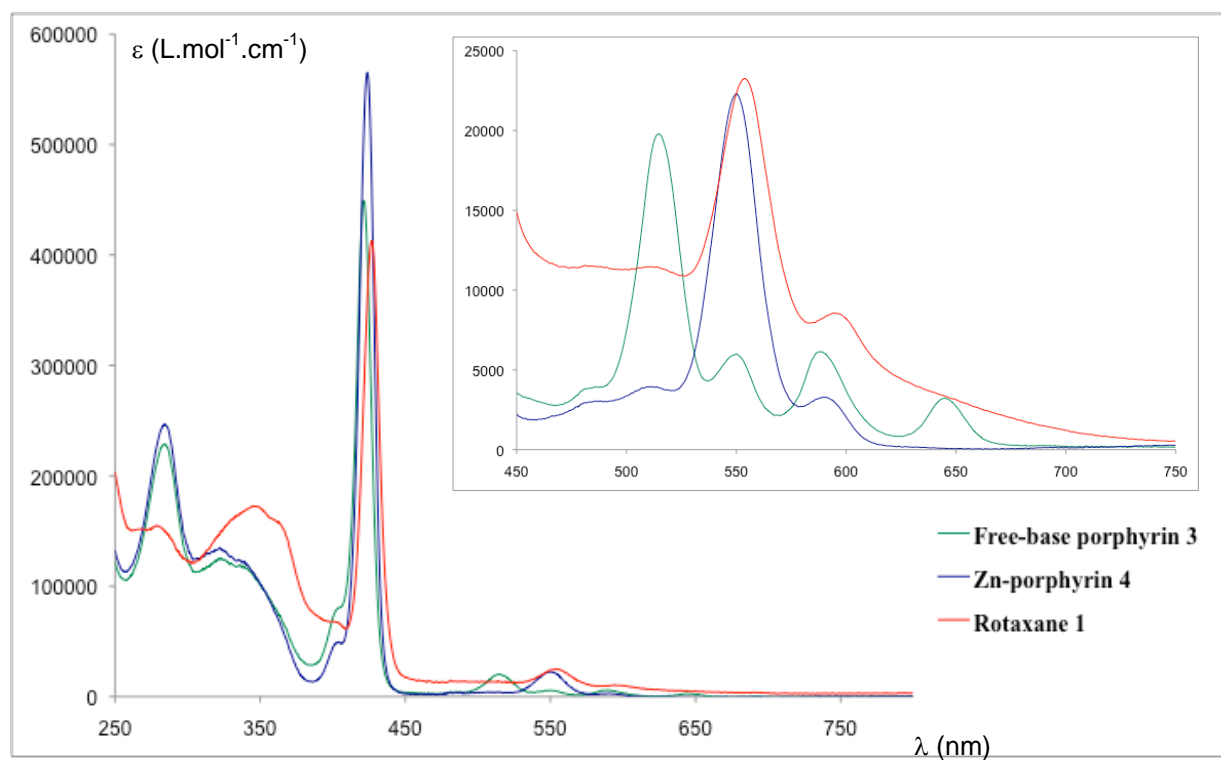
**Figure S2:**  $^1\text{H}$ - $^1\text{H}$  COSY (600 MHz) spectrum of rotaxane  $1^{4+}$  displaying couplings in the aromatic region.



**Figure S3:**  $^1\text{H}$ - $^1\text{H}$  COSY (600 MHz) spectrum of rotaxane  $1^{4+}$  displaying couplings in the aliphatic region.



**Figure S4:**  $^1\text{H}$ - $^1\text{H}$  NOESY (600 MHz) spectrum of rotaxane  $1^{4+}$  displaying NOE correlations between the rod and the tetra-macrocycle in the aromatic region.



**Figure S5:** UV-visible absorption spectra of free-base porphyrin **3**, Zn-porphyrin **4** and rotaxane  $1^{4+}$ .