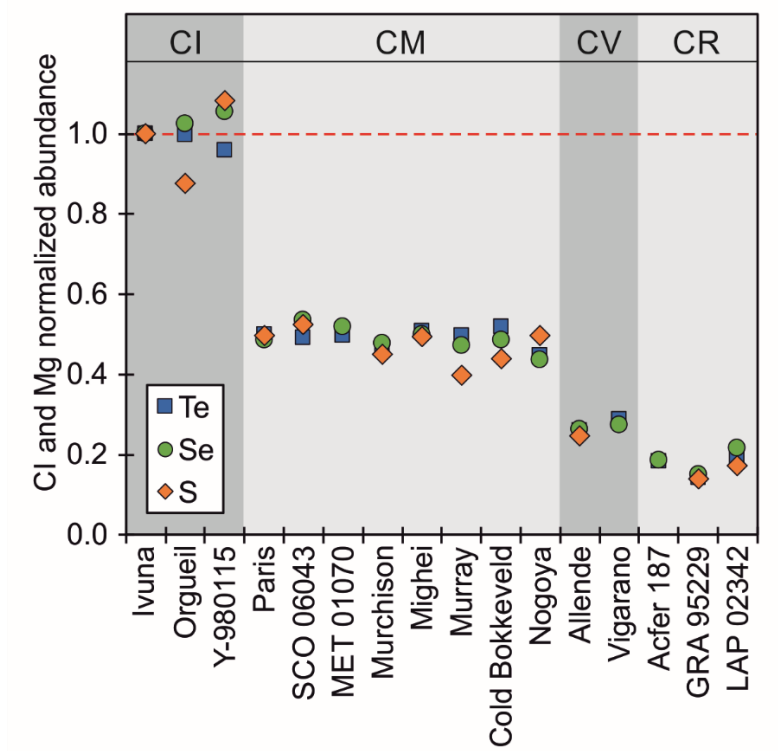


475 **Supplementary material**

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477

478 **Supplementary Figure 1: Sulfur, Se and Te abundances in carbonaceous chondrites relative to CI (Ivuna) and**
479 **Mg normalized.**

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481

482 **Supplementary Table 1: Average volatile element abundances in carbonaceous chondrites and the BSE.**

	CI	%RSD	Source	CM	CV	CR	Source	BSE	%RSD	Source
Mg	96700	2.8	(25)	121000	141000	124000	(25)	221700	1	(1)
Fe	193000	2.9	(25)	220000	231000	240000	(25)	63000	1	(1)
Pd	0.560	4.0	(27)	0.630	0.710	0.690	(61)	0.00710	20	(1)
Si	107000	3.0	(27)	127000	157000	150000	(61)	212000	1	(1)
Cr	2720	3.6	(25)	3170	3480	3860	(25)	2520	10	(1)
P	905	2.3	(25)	982	1040	903	(25)	87.0	15	(1)
Mn	2040	4.0	(25)	1770	14004	1830	(25)	1050	10	(1)
Li	1.45	10	(27)	1.50	1.70	-	(61)	1.60	20	(1)
As	1.83	4.4	(25)	1.81	1.63	1.39	(25)	0.0680	30	(1)
Cu	146	2.6	(25)	140	107	91.3	(25)	30.0	20	(62)
K	410	6.2	(25)	384	266	261	(25)	260	15	(1)
Sb	0.135	14	(27)	0.130	0.0850	0.0800	(61)	0.00540	40	(1)
Ga	9.25	5.5	(25)	6.81	5.18	3.54	(25)	4.40	5	(1)
Na	4930	5.9	(25)	3900	2680	2290	(25)	2590	5	(1)
Ge	32.6	9.0	(27)	26.0	16.0	18.0	(61)	1.20	20	(1)
Rb	2.09	2.0	(25)	1.58	1.15	1.04	(25)	0.605	10	(1)
Cs	0.173	1.6	(25)	0.118	0.0804	0.0585	(25)	0.0180	50	(1)
Bi	0.110	7.0	(27)	0.0700	0.0500	-	(61)	0.00300	50	(1)
Ag	0.220	2.5	(25)	0.133	0.0899	0.0400	(25)	0.00900	33	(62)
Pb	2.62	2.2	(25)	1.50	1.07	0.466	(25)	0.185	10	(1)
Zn	337	3.8	(25)	196	123	61.4	(25)	54.0	9	(1)
Te	2.29	1.2	this study	1.42	0.890	0.503	this study	0.0110	15	(3)
Sn	1.55	2.1	(25)	0.921	0.685	0.301	(25)	0.140	30	(1)
Se	20.6	0.75	this study	12.7	7.95	4.75	this study	0.0800	21	(3)
S	51000	0.67	this study	30800	19800	10100	this study	211	19	(3)
Cd	0.696	2.0	(25)	0.422	0.265	0.138	(25)	0.0310	19	(14)
Cl	115	31	(26)	151	85.0	70.0	(26)	25.0	36	(26)*
Br	0.189	38	(26)	0.123	0.0500	0.100	(26)	0.0740	35	(26)*
In	0.0797	2.1	(25)	0.0474	0.0290	0.0149	(25)	0.0120	17	(14)
I	0.057	12	(26)	0.0650	0.0350	0.0270	(26)	0.0140	79	(26)*
Tl	0.136	2.0	(25)	0.0867	0.0593	0.0274	(25)	0.00410	25	(1)

483 * average of compilation²⁶

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486 **Supplementary Table 2: Sulfur, Se and Te abundances [$\mu\text{g/g}$] in different carbonaceous chondrites**
 487 **determined by isotope dilution.**

Sample	Group	S	2sd	Se	2sd	Te	2sd	Source
Orgueil	CI	45300	680	21.41	0.32	2.285	0.055	A. Bischoff, Univ. Münster, Germany
Ivuna	CI	51000	770	20.56	0.31	2.260	0.054	J.-A. Barrat, UBO, France
Y-980115	CI	61270	920	24.15	0.36	2.405	0.058	NIPR, Japan
SCO 06043	CM1	32290	480	13.26	0.20	1.340	0.032	MWG NASA, USA.
MET 01070	CM1	-	-	13.55	0.20	1.430	0.034	MWG NASA, USA
Paris	CM2	32640	490	12.75	0.19	1.440	0.035	J.-A. Barrat, UBO, France
Murchison	CM2	29170	440	12.50	0.19	1.372	0.033	A. Bischoff, Univ. Münster, Germany
Mighei	CM2	31940	480	13.06	0.20	1.455	0.035	Field Museum, Chicago, USA
Murray	CM2	26060	390	12.47	0.19	1.440	0.035	Smithsonian Institute, USA
Cold Bokkeveld	CM2	27500	410	12.25	0.18	1.435	0.035	NHM London, GB.
Nogoya	CM2	31490	470	11.15	0.17	1.260	0.030	MfN Berlin, Germany.
Allende	CV3	19750	300	8.51	0.13	0.922	0.022	Smithsonian Institute, USA
Vigarano	CV3	-	-	7.40	0.11	0.860	0.021	J. Schlüter, Univ. Hamburg
Acfer 187	CR2	-	-	5.04	0.08	0.539	0.013	A. Bischoff, Univ. Münster, Germany
GRA 95229	CR2	10140	150	4.45	0.07	0.458	0.011	MWG NASA, USA
LAP 02342	CR2	10060	150	5.06	0.08	0.498	0.012	MWG NASA, USA

488 The 2 sd intermediate precision was estimated from the 2RSD from repeated analyses and digestions of Murchison

489 CM2 (see text).

490