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Shallow-water carbonates of the Coimbra Formation, Lusitanian Basin (Portugal): contributions to the integrated stratigraphic analysis of the Sinemurian sedimentary successions in the western Iberian Margin

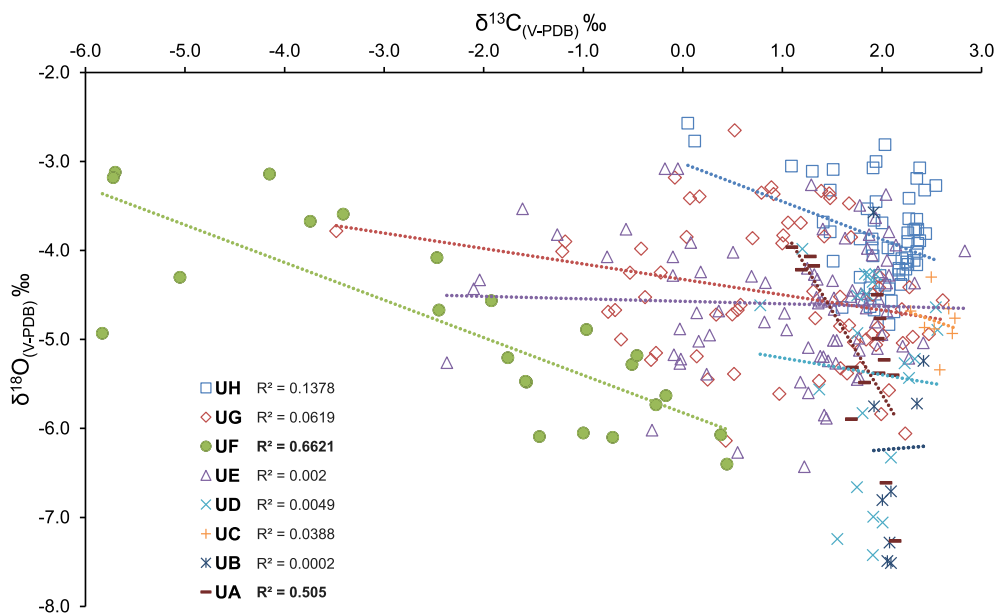
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Supplementary Figure S1. Cross plot of $\delta^{13}\text{C}_{\text{carb}}$ and $\delta^{18}\text{O}_{\text{carb}}$ from the Coimbra Fm at S. Pedro de Moel, Portugal: see text.

Supplementary Table S1. TOC, S, insoluble residue and bulk rock carbonate carbon- and oxygen-isotope data from the Coimbra Formation at S. Pedro de Moel, Portugal

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
Água de Madeiros	12,592				1.90	-3.87
	12,524	9.43			1.51	-3.09
Top UH	12511					
	12,411				1.90	-3.97
	12,202				2.03	-2.81
	12,144				2.20	-4.09
	12,140				2.17	-4.22
	12,080				2.36	-3.92
	12,020				2.27	-3.64
	12,002				2.43	-3.32
	11,984	0.82	0.18	24		
	11,974				2.35	-3.65
	11,946				2.32	-3.77
	11,932				2.27	-3.41
	11,888				2.34	-3.76
	11,838				1.94	-3.45
11,812				2.38	-3.07	
11,775				2.32	-4.11	

(continued on next page)

Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	11,738				2.35	-4.01
	11,700				2.35	-4.16
	11,695				2.19	-4.38
	11,672				2.26	-4.16
	11,633				2.44	-3.81
	11,579				2.54	-3.27
	11,549				2.36	-3.76
	11,517				2.09	-4.57
	11,479				2.07	-4.83
	11,444				2.25	-4.13
	11,417				2.38	-3.89
	11,350				2.26	-3.90
	11,306				2.35	-3.19
	11,255				2.24	-4.21
	11,208				2.21	-4.27
	11,178				2.17	-4.20
UH	11,120				1.91	-3.07
	11,110	0.84	0.11	19		
	11,109				2.26	-3.80
	11,068				1.94	-3.00
	11,055	2.92	0.37	42		
	11,054	5.4	0.66	55	1.30	-3.11
	11,053	5.4		45		
	11,043				1.78	-3.87
	11,031				1.85	-3.53
	10,976				0.12	-2.77
	10,975	0.95	0.12	19	0.05	-2.57
	10,964				1.48	-3.32
	10,893				1.51	-4.12
	10,872				1.48	-3.79
	10,859	0.47	0.13	16	1.09	-3.05
	10,848				1.91	-4.06
	10,835				2.00	-3.69
	10,823	0.33	0.04	19		
	10,813				1.60	-4.64
	10,788				2.12	-3.99
	10,783				2.06	-3.97
	10,748				1.80	-4.55

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Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	10,733				2.07	-4.43
	10,692				1.93	-4.49
	10,660				1.88	-4.42
	10,617				2.12	-4.69
	10,572				2.17	-4.27
	10,507				2.25	-4.08
	10,400				1.98	-4.28
	10,368				1.88	-4.63
	10,348				2.03	-4.39
	10,301				1.41	-3.68
	10,292				1.92	-4.67
	10,271				1.78	-4.30
	10,184				1.92	-3.66
	10,148					
Top UG	9900					
	9812				2.31	-4.97
	9750				2.20	-4.66
	9710				2.21	-5.04
	9670				2.61	-4.56
	9600				2.47	-4.94
	9565				1.67	-4.84
	9535				1.94	-5.06
	9517				1.96	-4.86
	9490				1.97	-4.42
	9465				1.58	-5.32
	9445				1.37	-5.46
	9415				2.01	-4.95
	9395				1.91	-4.50
	9345				1.58	-4.85
	9300				1.72	-5.03
	9255				-3.48	-3.78
	9235				0.97	-5.61
	9195				-0.27	-5.15
	9180				-0.75	-4.69
	9170				-0.68	-4.67
	9160				1.99	-5.84
	9145				2.23	-6.06
	9110				2.07	-5.57

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Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	9085				2.27	-4.41
	9070				1.90	-4.94
	9050				1.84	-5.00
	9020				0.51	-5.39
	8985				1.33	-4.76
	8955				-0.53	-4.25
	8910				1.98	-4.30
	8835				1.78	-5.32
	8605				1.65	-5.38
	8440				1.31	-4.46
UG	8400				1.42	-3.84
	8380				1.58	-4.52
	8345				1.69	-3.85
	8300				1.67	-3.47
	8230				1.47	-3.36
	8205				1.48	-3.41
	8185				1.39	-3.33
	8175				1.00	-3.92
	8165				1.01	-3.83
	8140				1.18	-3.69
	8010				0.50	-4.72
	8079				0.55	-4.67
	8050				1.06	-3.69
	8040	6.34	1.48	48		
	8039	7	2.33	54	0.25	-5.45
	8028				0.58	-4.61
	8000				0.89	-3.29
	7980				0.91	-3.37
	7910				0.79	-3.35
	7880				0.70	-3.86
	7865	2.48	0.31	37	0.33	-4.72
	7840	2.13	0.12	36		
	7835	11.5	2.8	44	0.43	-6.14
	7792				-0.38	-4.52
	7780	3.5	1.58	22	0.14	-5.19
	7765	3.68	1.17	24		
	7730				0.04	-3.85
	7710				-0.08	-3.18

(continued on next page)

Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	7695				0.52	-2.65
	7635				0.17	-3.39
	7610				0.07	-3.41
	7580				-0.32	-5.23
	7545				-0.22	-4.25
	7514				-0.42	-3.98
	7496				-1.21	-4.01
	7490				-1.18	-3.90
	7475				-0.62	-5.00
	7465	1.72	0.74	17	-0.70	-6.10
	7400				-1.76	-5.20
	7375				-0.97	-4.89
	7360	1.78	1	23	-0.27	-5.73
	7356				-0.51	-5.28
	7350	3.5	0.65	36	-0.46	-5.18
	7340				-1.44	-6.09
	7312	7.75	0.77	43		
	7310	7.15	0.59	40	-1.00	-6.05
	7285				-5.83	-4.93
	7280				-1.57	-5.48
	7275				-5.05	-4.30
	7271	8.65	1.9	42		
	7270				-1.58	-5.47
	7270	8.9	3.03	44		
UF	7265	8.78	2.57	45		
	7243	8.25	2.68	42		
	7238	3.65	1.48	28	-1.92	-4.56
	7235	1.25	0.49	8		
	7225				-5.70	-3.12
	7220				-5.72	-3.18
	7180				-2.47	-4.08
	7170				-3.41	-3.59
	7155				-4.15	-3.14
	7130				-2.45	-4.67
	7105	4.14	0.51	26	0.44	-6.40
	7100	4.8	0.55	27	0.38	-6.07
	7080				-3.74	-3.67
	7077	3.85	0.43	25		

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Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	7075	5.9	0.79	61	-0.17	-5.63
	7075	6.21	2	59		
	7050					
	7040				-2.04	-4.33
	7020				-1.26	-3.82
	6965				-1.61	-3.53
	6950	1.45	0.1	27		
	6940				-0.76	-4.07
	6930				-0.57	-3.76
	6905				-0.18	-3.08
	6880				-0.05	-3.08
	6869				-0.10	-4.07
	6860				-0.10	-4.28
	6781				0.36	-4.68
	6773				0.14	-4.70
	6736				0.27	-4.95
	6698				0.08	-3.91
	6651	6.28	0.4	70		
	6649	5.65	0.34	79	-0.31	-6.02
	6637				-0.09	-5.17
	6633				-2.37	-5.26
	6590	9.2	0.58	60	0.24	-5.39
	6586	7.3	0.44	58	-0.03	-5.27
	6571				0.55	-6.27
	6550				0.18	-4.24
	6510				0.16	-5.02
	6480				-0.02	-5.22
	6465				-0.03	-4.88
	6442				-2.10	-4.43
	6410				0.82	-4.80
	6390				1.32	-4.27
	6355				1.63	-3.86
	6339				1.36	-4.59
	6318				1.41	-3.76
	6300				1.85	-3.98
	6280				1.94	-3.63
	6275				1.87	-3.82
	6269				1.90	-4.05

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Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	6210				2.04	-3.37
	6170				1.78	-3.49
	6140				2.07	-3.79
	6102				2.07	-4.28
	6080				1.96	-4.24
	6070				2.33	-4.37
	6060				1.29	-3.26
	6050				1.79	-4.48
	6034				1.25	-4.20
UE	6010				2.27	-5.21
	5995				2.42	-5.04
	5986				2.83	-4.00
	5975				2.05	-4.68
	5935				2.14	-3.94
	5900				1.81	-4.55
	5885				2.05	-4.11
	5840				2.05	-4.37
	5823				1.69	-4.52
	5800				1.84	-4.65
	5770				1.39	-4.57
	5742				1.34	-4.53
	5730				1.52	-4.53
	5700	7.51	0.46	31	1.26	-5.60
	5697	6.95	0.5	30		
	5694	8.93	0.64	32		
	5675				0.83	-4.36
	5660				1.02	-4.70
	5650				0.69	-4.29
	5640				0.50	-4.02
	5630				1.04	-4.89
	5600				1.50	-4.34
	5590	2.35	0.27	27	1.26	-5.09
	5565				1.97	-4.54
	5550				1.52	-4.66
	5520				1.35	-4.32
	5480				1.70	-4.45
	5465	7.45	0.55	36		
	5463	6.95	0.33	39	1.22	-6.43

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Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	5458				1.18	-5.48
	5452				1.44	-5.89
	5435				1.42	-5.85
	5398				1.55	-5.01
	5393				1.51	-5.01
	5365				1.77	-5.12
	5335				1.77	-5.42
	5334				1.75	-5.45
	5314				1.38	-5.19
	5308				1.41	-5.19
	5285				1.46	-5.24
	5275	0.18	0.02	6		
	5260				1.95	-5.10
	5240	0.29	0.02	2		
	5235				1.77	-4.99
	5220				2.00	-4.95
	5185				1.93	-4.81
	5130				2.21	-5.08
	5075				1.53	-5.27
	5050					
	4945				1.91	-7.42
	4782				1.91	-6.99
	4780				2.01	-7.06
	4750	6.37	0.32	42		
	4485				2.09	-6.33
	4272				1.75	-4.51
	4270				1.87	-4.27
	4194	1.11	0.96	42		
	4190	1.19	0.81	41		
	4105	1.89	0.48	35		
	4070	2.95	1.15	40		
	4055				1.20	-3.98
	4035				1.85	-4.49
	3930				1.83	-4.26
	3882				1.91	-4.35
UD	3880				1.94	-4.27
	3559				1.81	-5.83
	3415				1.75	-6.66

(continued on next page)

Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	3380				1.55	-7.24
	3285				1.37	-5.56
	3190	1.51	0.5	37		
	3155	1.46	0.96	39		
	3130	0.48	0.68	33		
	3100				0.78	-4.61
	3090	0.42	0.57	28		
	3070	0.31	0.39	22		
	3050				1.75	-4.93
	2915				2.33	-5.22
	2805				2.27	-5.43
	2700				2.54	-4.64
	2565				2.56	-4.89
	2450				2.23	-5.27
	2325				2.52	-4.88
	2150				2.29	-4.68
	2030				2.58	-5.34
UC	1886				2.73	-4.76
	1885				2.67	-4.65
	1745				2.71	-4.93
	1682				2.50	-4.30
	1580				2.43	-4.87
	1470	0.23	0.02	19		
	1465				2.42	-5.24
	1450				2.35	-5.72
	1390				1.92	-3.57
	1335				1.92	-5.75
UB	1320				2.05	-7.49
	1315	1.25	0.06	30		
	1310				2.09	-6.71
	1300				2.08	-7.28
	1281				2.09	-7.51
	1275				2.00	-6.80
	1250				2.13	-7.26
	1230				2.04	-6.61
	1216				2.11	-5.40
	1210				1.96	-4.99

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Supplementary Table S1. (continued)

Units	Cumulative thickness (cm)	TOC (wt%)	S (%)	Insoluble residue (%)	$\delta^{13}\text{C}_{(\text{V-PDB})}$ (‰)	$\delta^{18}\text{O}_{(\text{V-PDB})}$ (‰)
	1200				2.02	-5.23
	1190				1.97	-5.38
	1185	0.6	0.03	15		
	1180				1.98	-4.76
	1160				1.69	-5.89
	1140				1.70	-5.31
	1130				1.83	-5.48
	1125	1.15	0.05	31		
	1120				1.95	-4.50
UA	1060	5.97	1.25	69		
	1050	3.6	0.11	85		
	1045	3.64	0.12	79		
	1000				1.09	-3.96
	995				1.31	-4.17
	990	2.47	0.12	85		
	970				1.19	-4.22
	955				1.28	-4.07
	940	0.72	0.03	33		
	910	0.75	0.03	35		
	140	5.82	0.27	79		
	135	4.45	0.18	68		
	120	3.33	0.12	62		
	0					