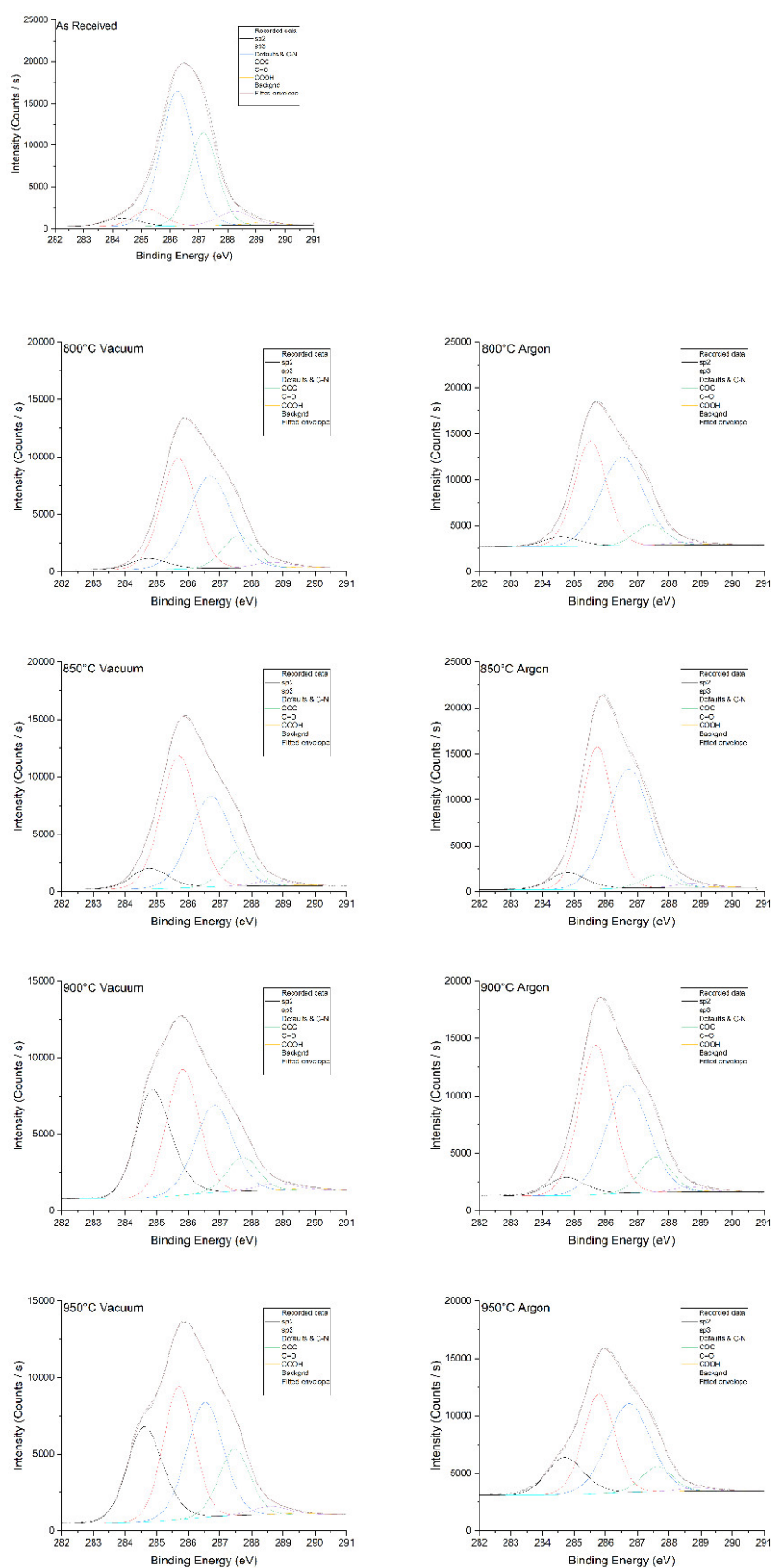




## Supplementary Materials

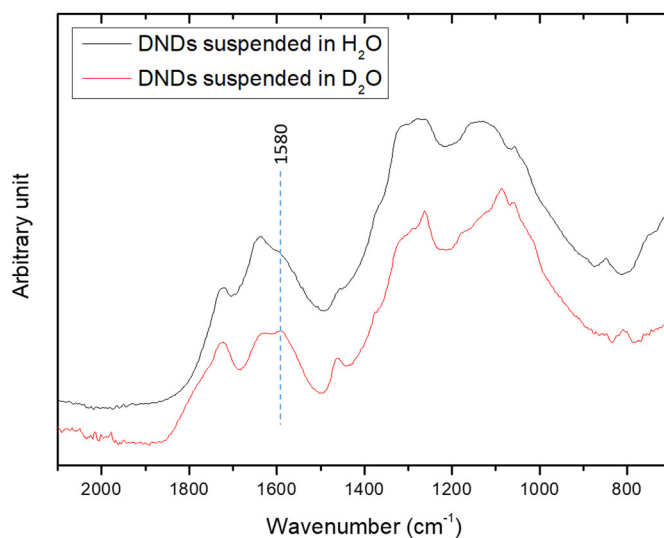


Argon annealing						
	C sp <sup>2</sup>	C sp <sup>3</sup>	CHx, C-N, defaults	C-O-C	C=O	COOH
As received	3,5	6,0	53,0	31,0	5,5	1,0
800°C 4h	4,5	40,5	46,0	7,5	1,0	0,5
850°C 4h	6,0	41,0	47,5	4,0	1,0	0,5
900°C 4h	6,0	43,0	40,0	9,5	1,0	0,5
950°C 4h	15,0	34,0	41,0	8,5	1,0	0,5

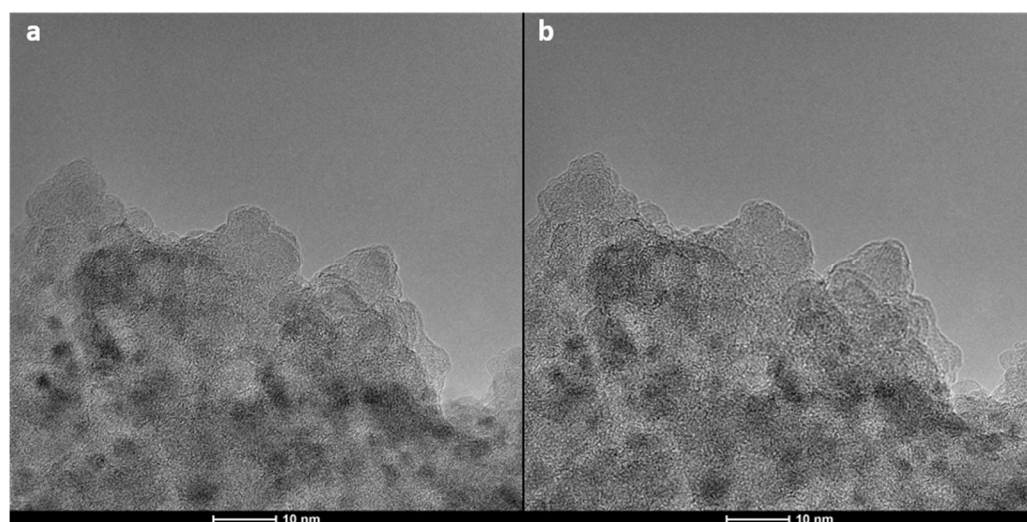
  

Vacuum annealing						
	C sp <sup>2</sup>	C sp <sup>3</sup>	CHx, C-N, defaults	C-O-C	C=O	COOH
As received	3,5	6	53	31	5,5	1
800°C 4h	4,5	41	41,5	10,5	2	0,5
850°C 4h	7,5	45	35	10	2	0,5
900°C 4h	30	32,5	26,5	8,5	2	0,5
950°C 4h	24	29	30	14,5	2	0,5

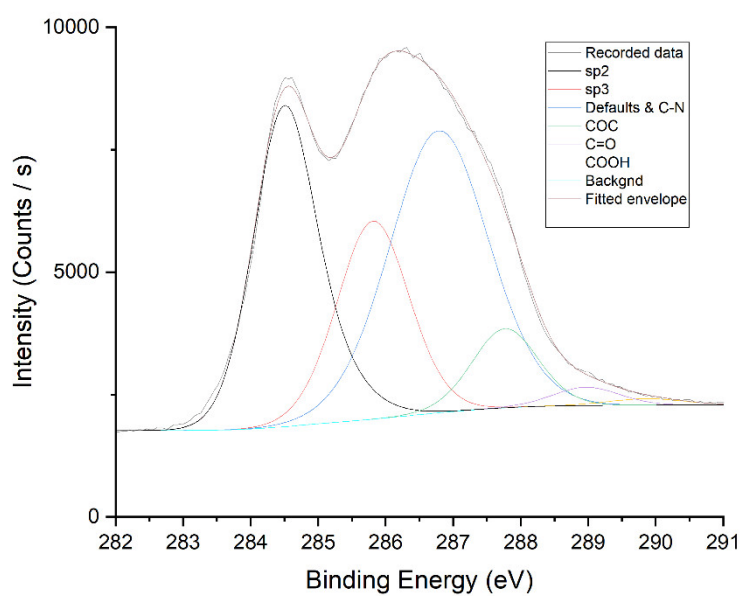
**Figure S1.** Fitted XPS C1s core levels and associated values.



**Figure S2.** FTIR of DNDs annealed at 800 °C for 4 h suspended in H<sub>2</sub>O and D<sub>2</sub>O.



**Figure S3.** HR-TEM images with different defocus values of DNDs annealed at 1100 °C under vacuum.

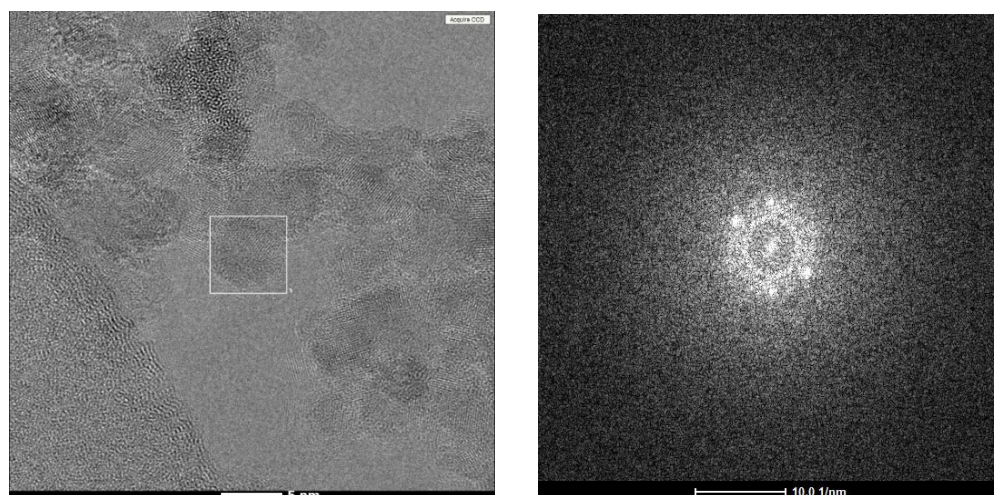


Vacuum annealing						
	C sp <sup>2</sup>	C sp <sup>3</sup>	CH <sub>x</sub> , C-N, defaults	C-O-C	C=O	COOH
1100°C 4h	30,5	20	39,5	7,5	2	0,5

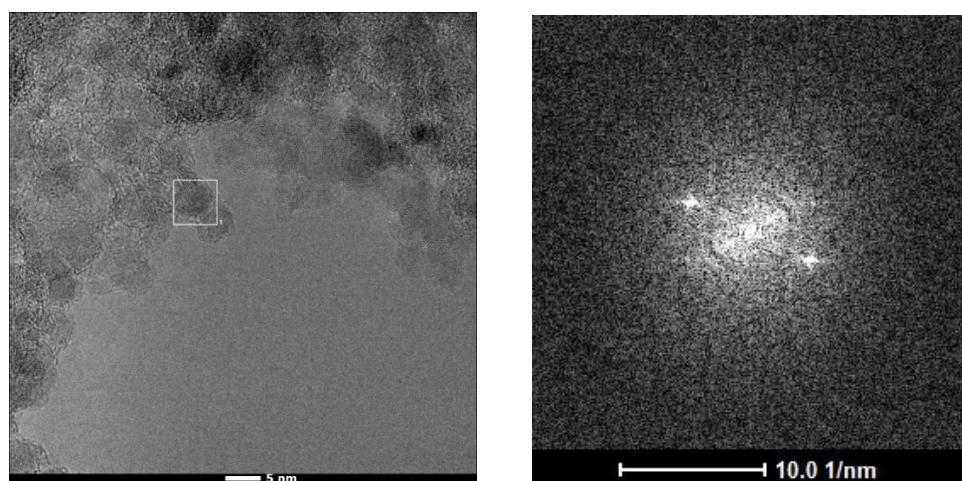
**Figure S4.** Fitted XPS C1s core level of DNDs annealed at 1100 °C under vacuum and associated values.

As received DND

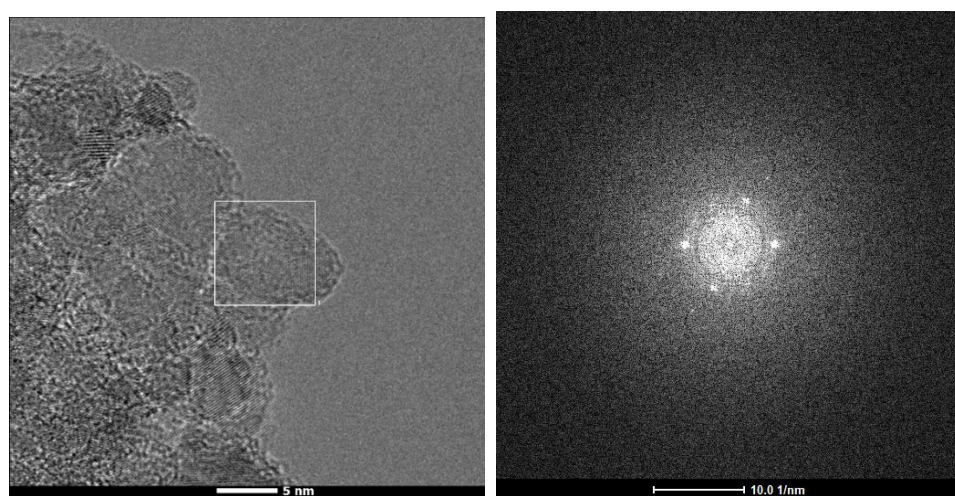




DND annealed under vacuum at 950 °C



DND annealed under vacuum at 1100 °C



**Figure S5.** HR-TEM images (left) and FFT (right) performed in the area corresponding to the red square.