

Supporting Information

Dapdiamides, Tripeptide Antibiotics Formed by Unconventional Amide Ligases

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[†]Dedicated to the late Dr. John W. Daly of NIDDK, NIH, Bethesda, Maryland and to the late Dr.
Richard E. Moore of the University of Hawaii at Manoa for their pioneering work on bioactive
natural products.

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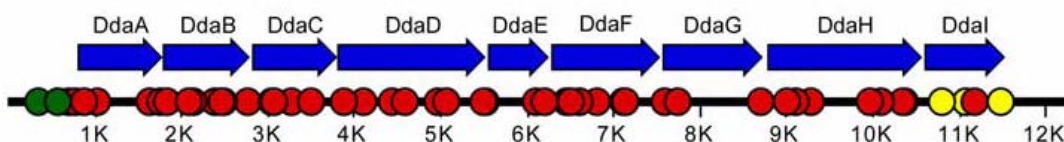
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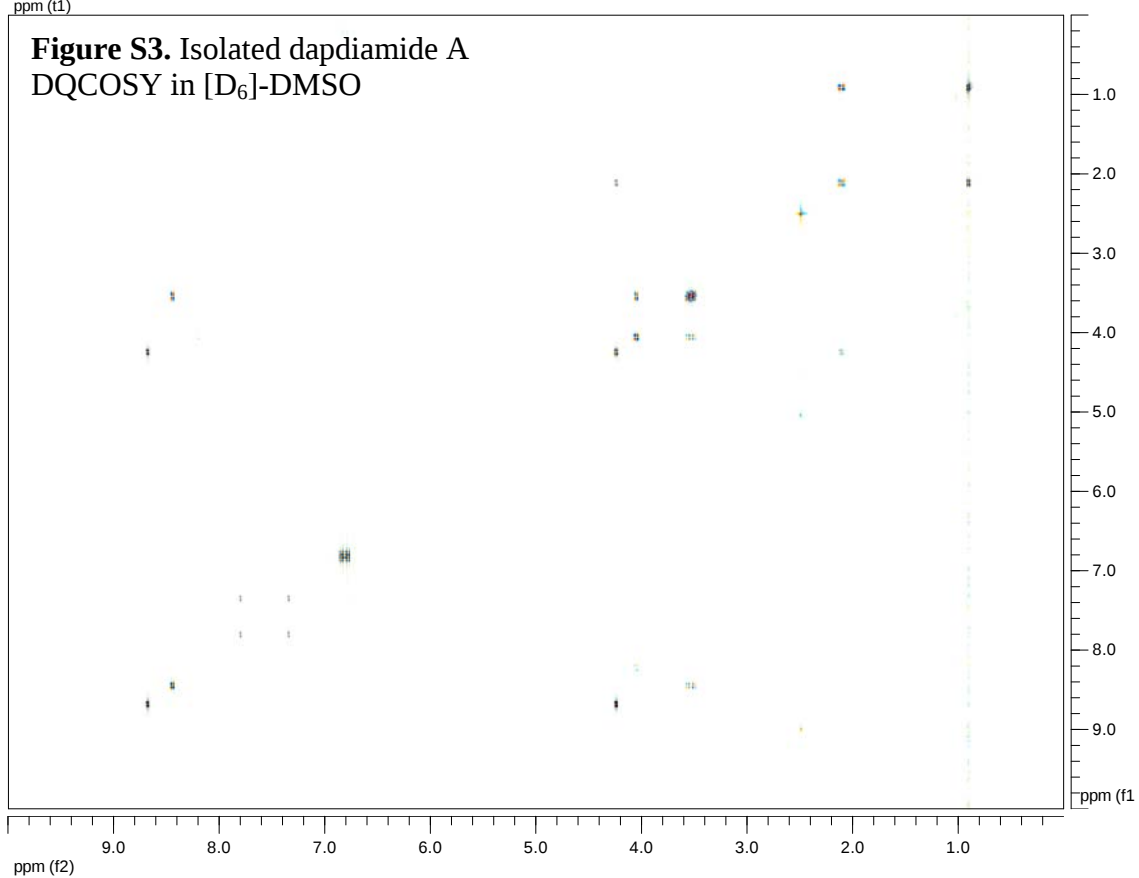
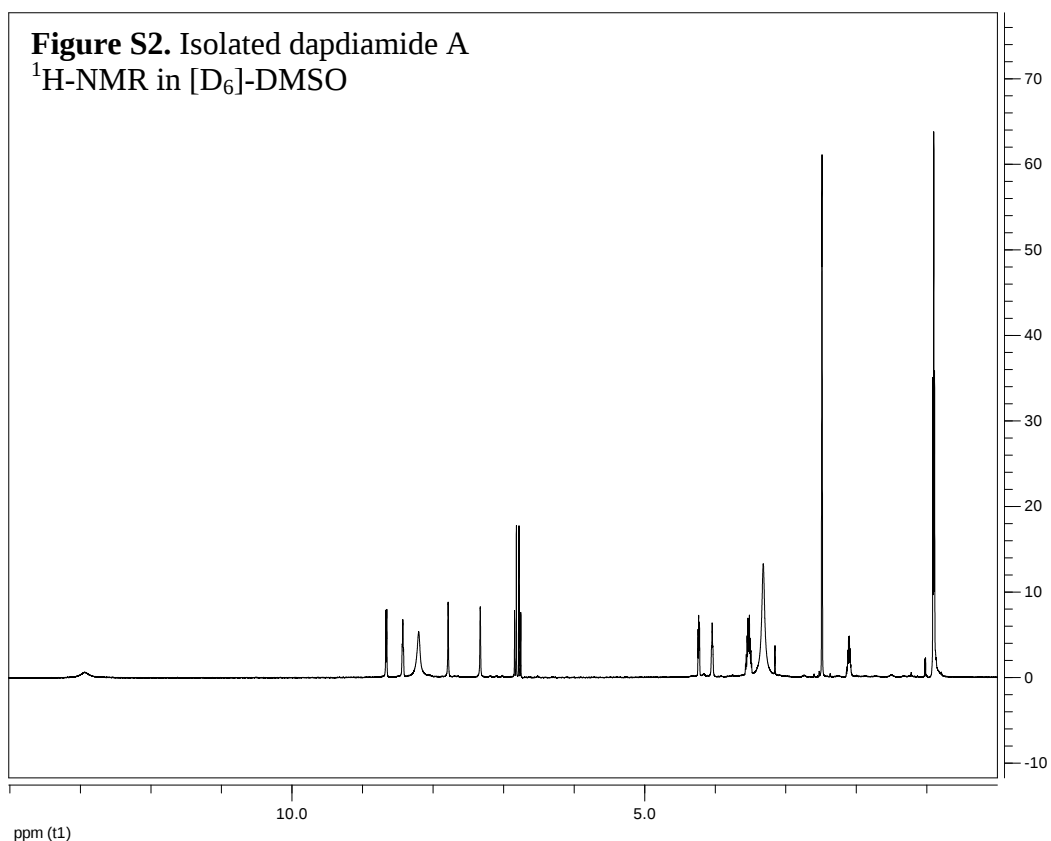
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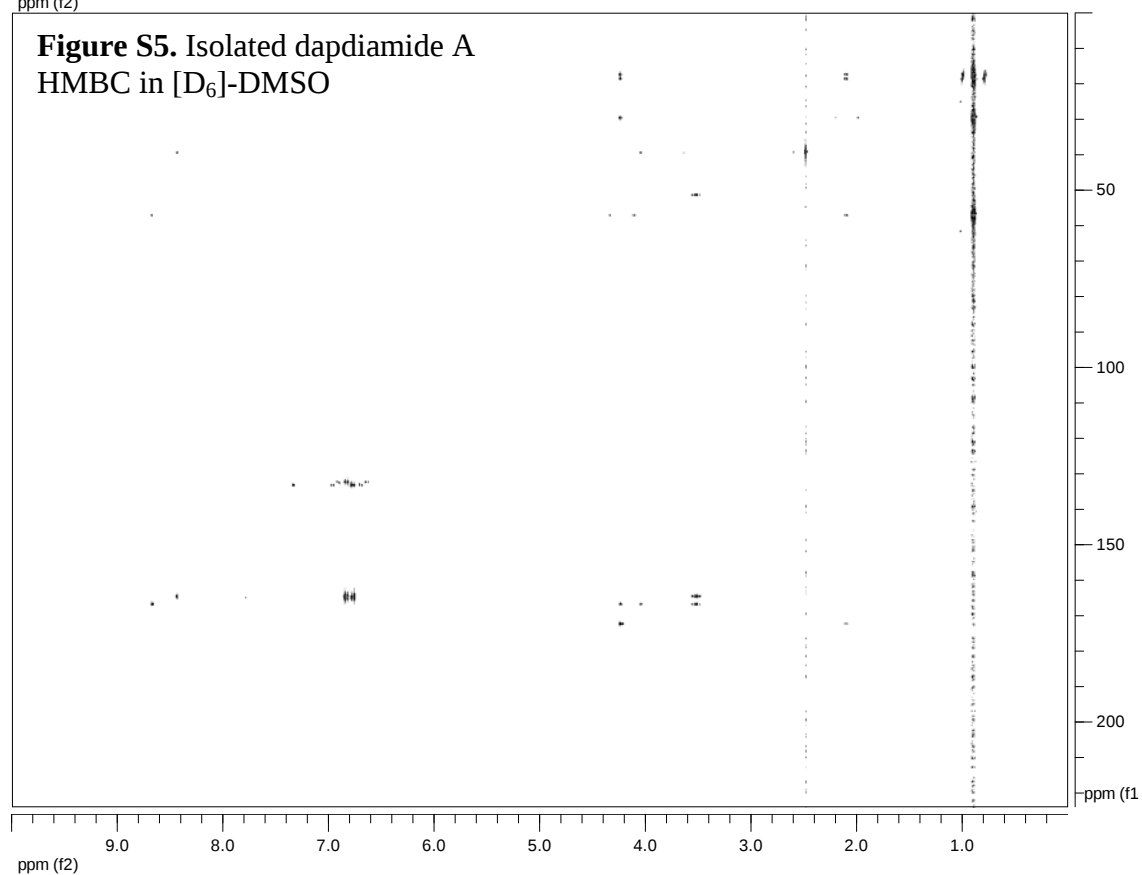
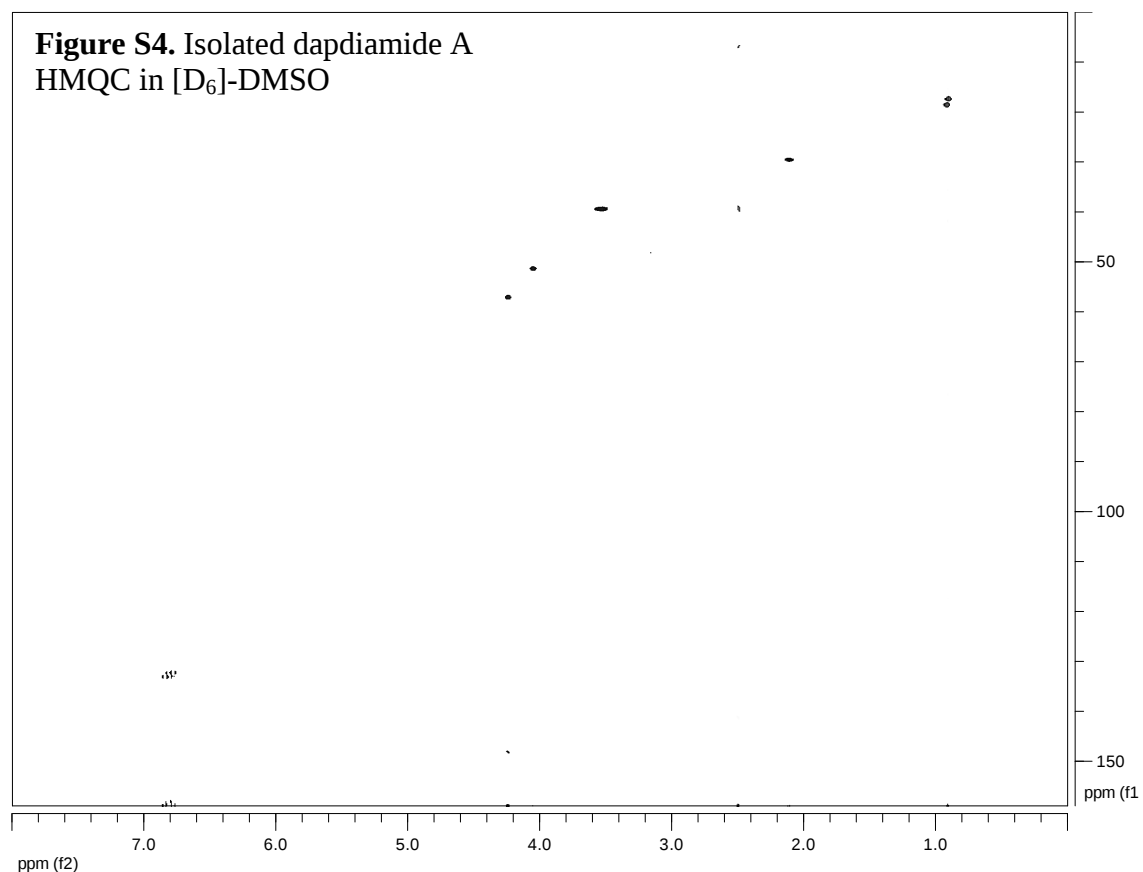
Table S1. Dapdiamide Biosynthetic Gene Cluster Sequence Homologs.

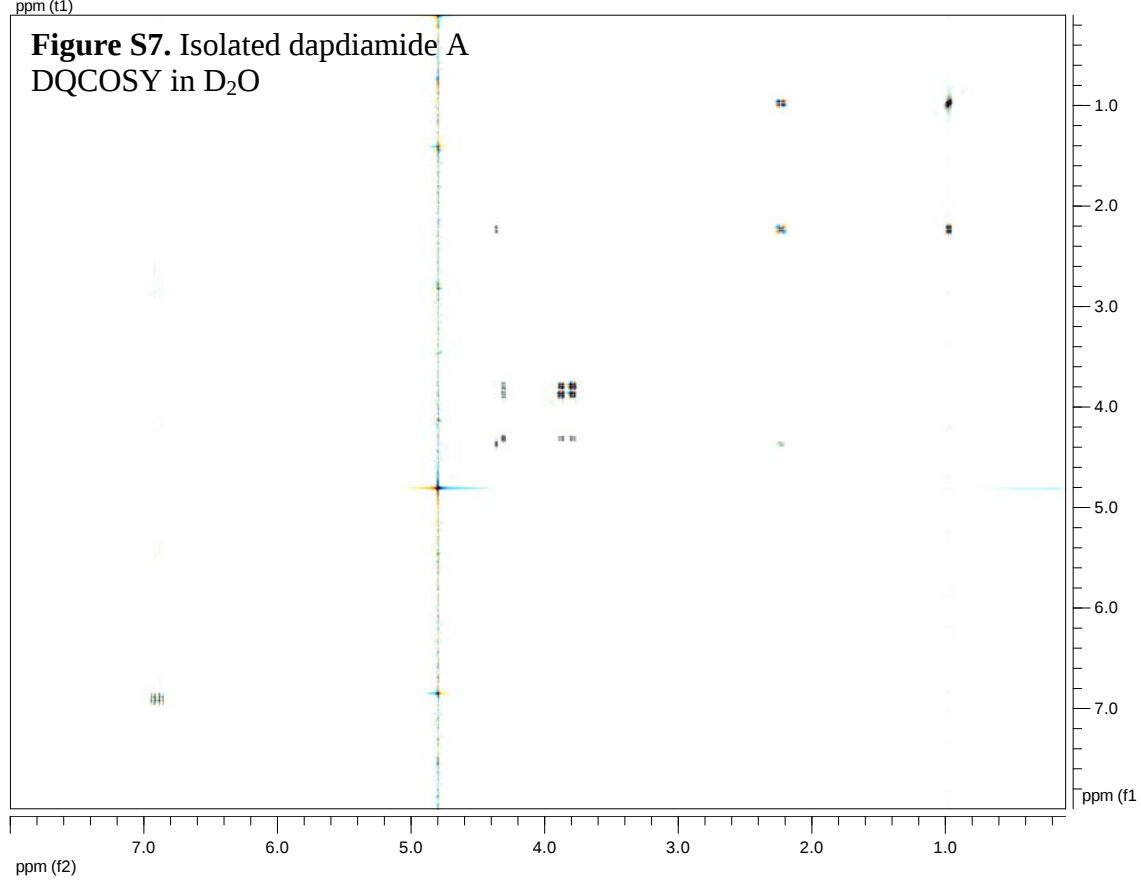
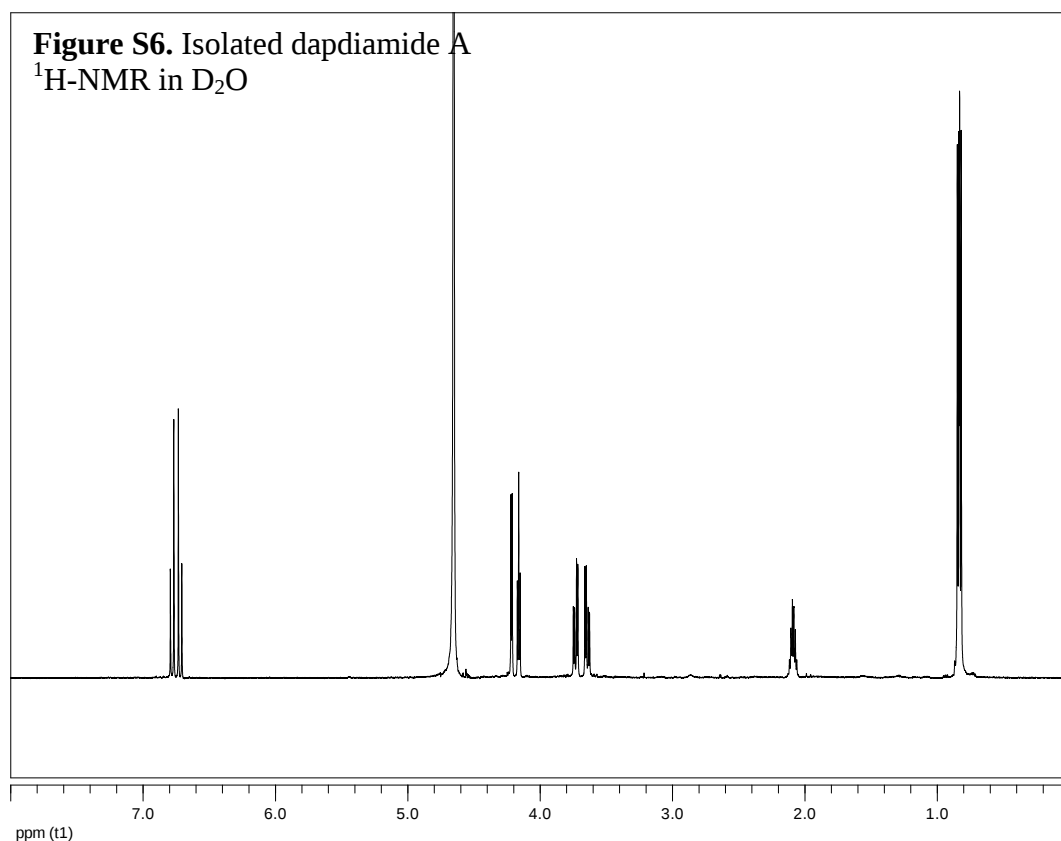
Protein	Length (aa)	Proposed Function	Sequence Similarity	Ident/sim	Accession
DdaA	330	Cysteine synthase	Veis_1207 (Verminephrobacter eiseniae EF01-2)	49/69	YP_995996
DdaB	344	Ornithine cyclodeaminase	Dd703_1673 (Dickeya dadantii Ech703)	51/68	YP_002987292
DdaC	329	None-heme iron dependent dioxygenase	PCC7424_5755 (Cyanotheca sp. PCC 7424)	43/63	YP_002381050
DdaD	578	Two-domain NRPS: Adenylation-thiolation	SGR_653 (Streptomyces griseus subsp. griseus NBRC 13350)	33/51	YP_001822165
DdaE	241	Thioesterase	CLM_0366 (Clostridium botulinum A2 str. Kyoto-F)	30/52	YP_002802621
DdaF	424	Phosphoribosylglycinamide synthetase (amide ligase)	y4042 (Yersinia pestis KIM)	34/50	NP_671335
DdaG	396	Phenylacetate-CoA ligase (Amide ligase)	EFHG_01000 (Enterococcus faecalis HIP11704)	25/44	ZP_05567705
DdaH	607	Asparagine synthase	Haur_3584 (Herpetosiphon aurantiacus ATCC 23779)	34/55	YP_001546348
DdaI	316	DUF6 transmembrane	Ccel_0416 (Clostridium cellulolyticum H10)	25/48	YP_002504780

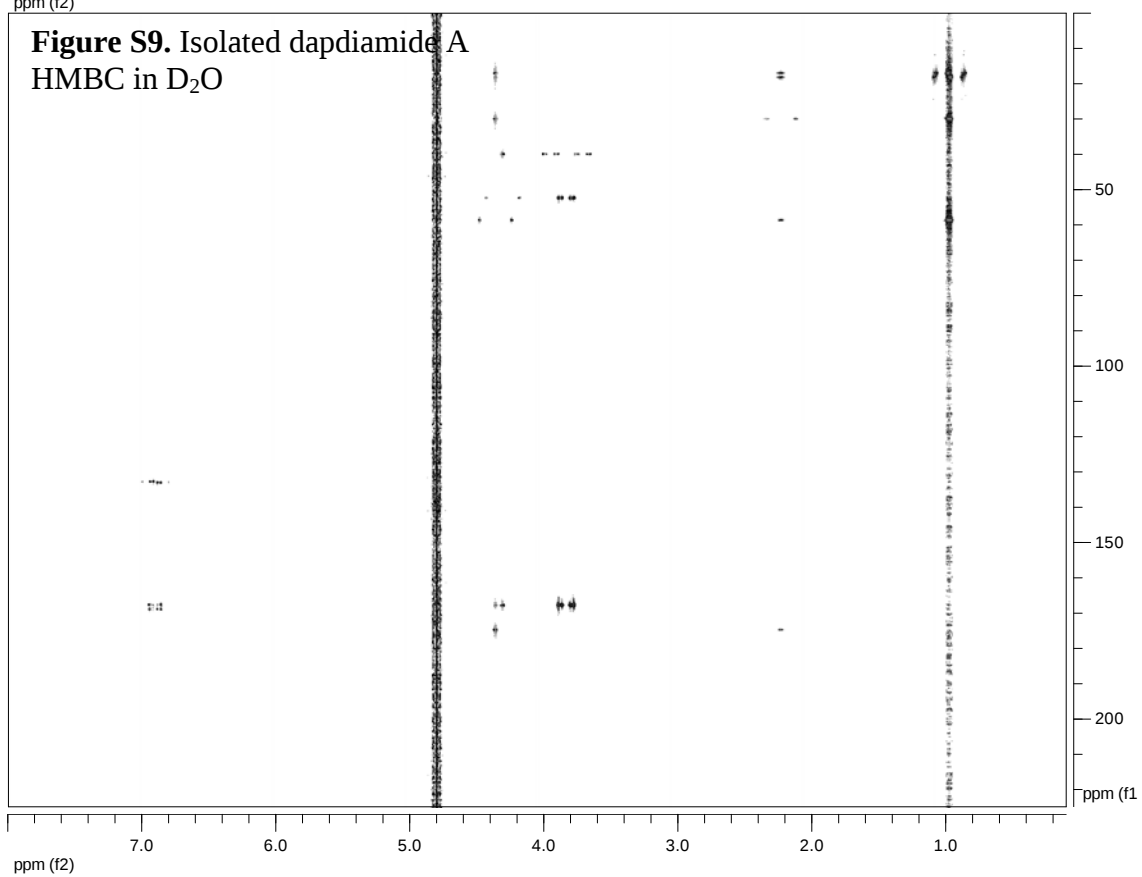
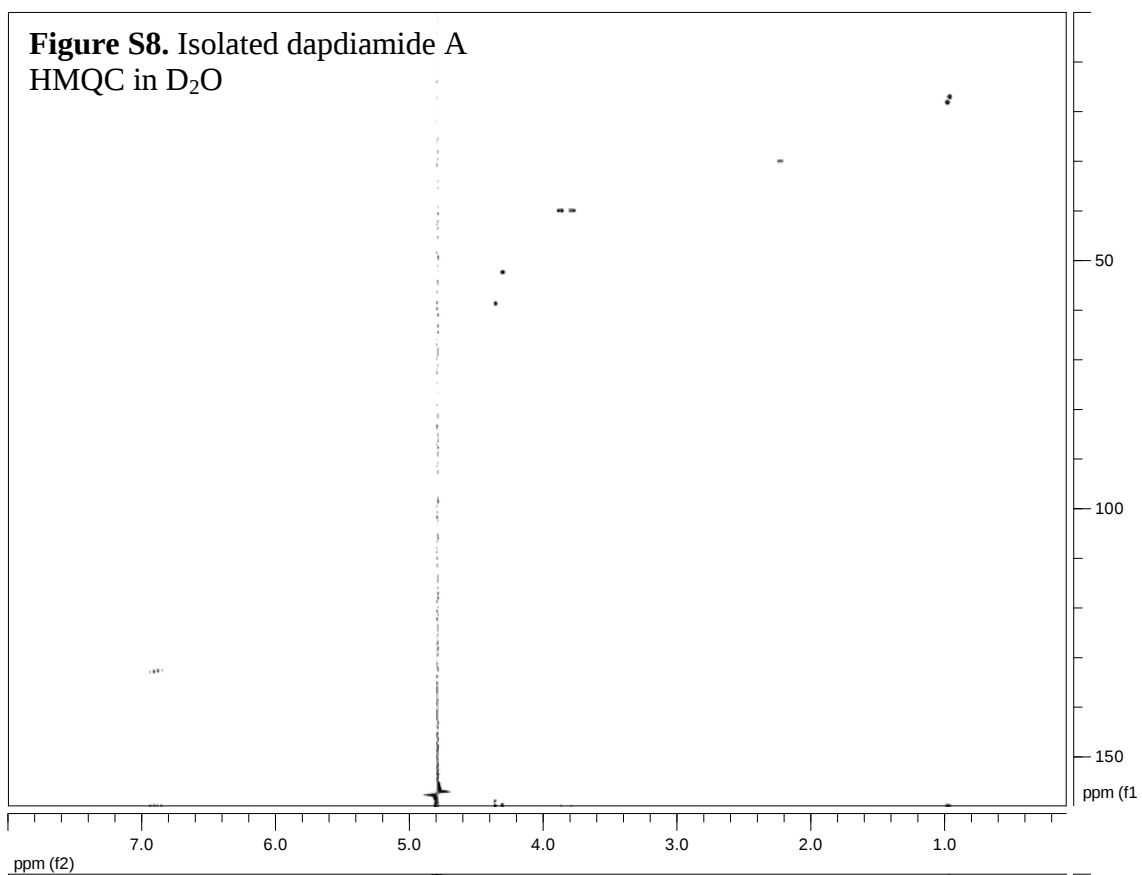
Figure S1. Contig containing open reading frames responsible for dapdiamide biosynthesis. Transposon insertions that disrupted dapdiamide biosynthesis are shown with red circles, yellow circles indicate insertions that reduced dapdiamide biosynthesis, and green circles indicate insertions that had no effect on dapdiamide production.

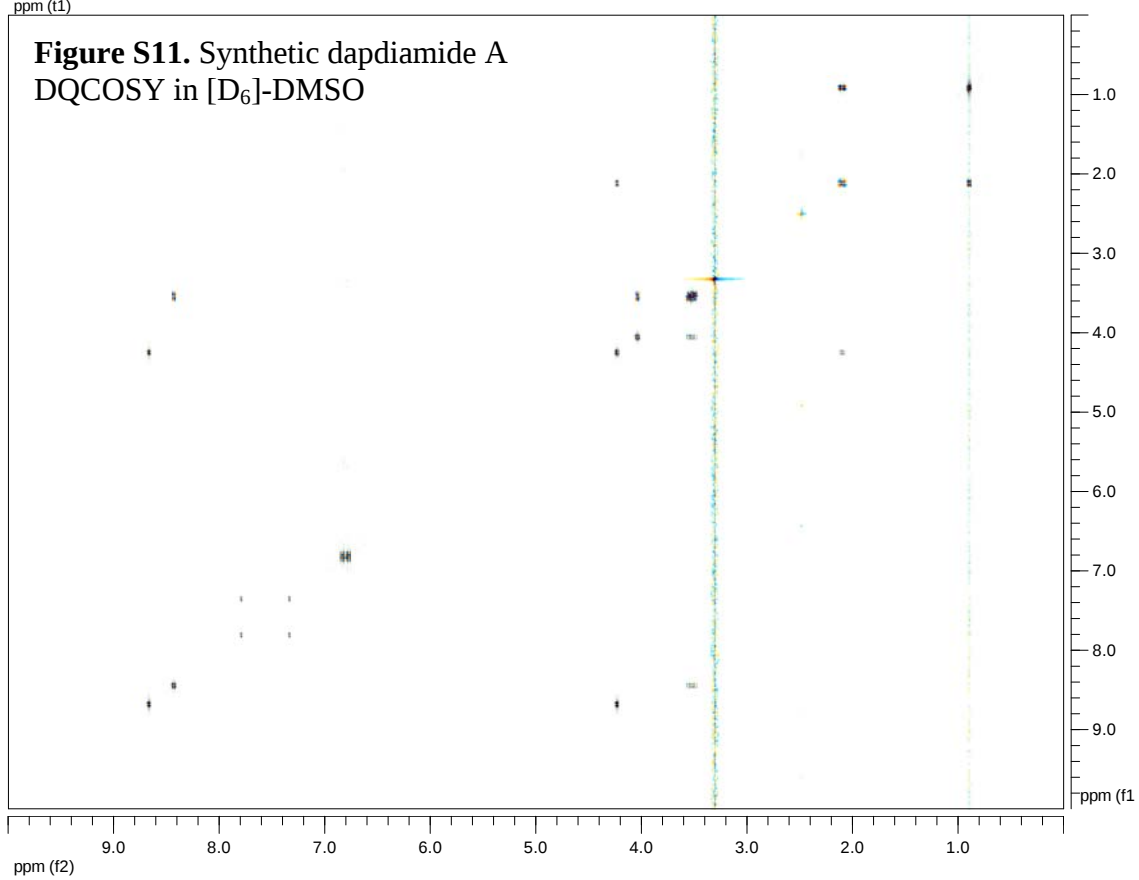
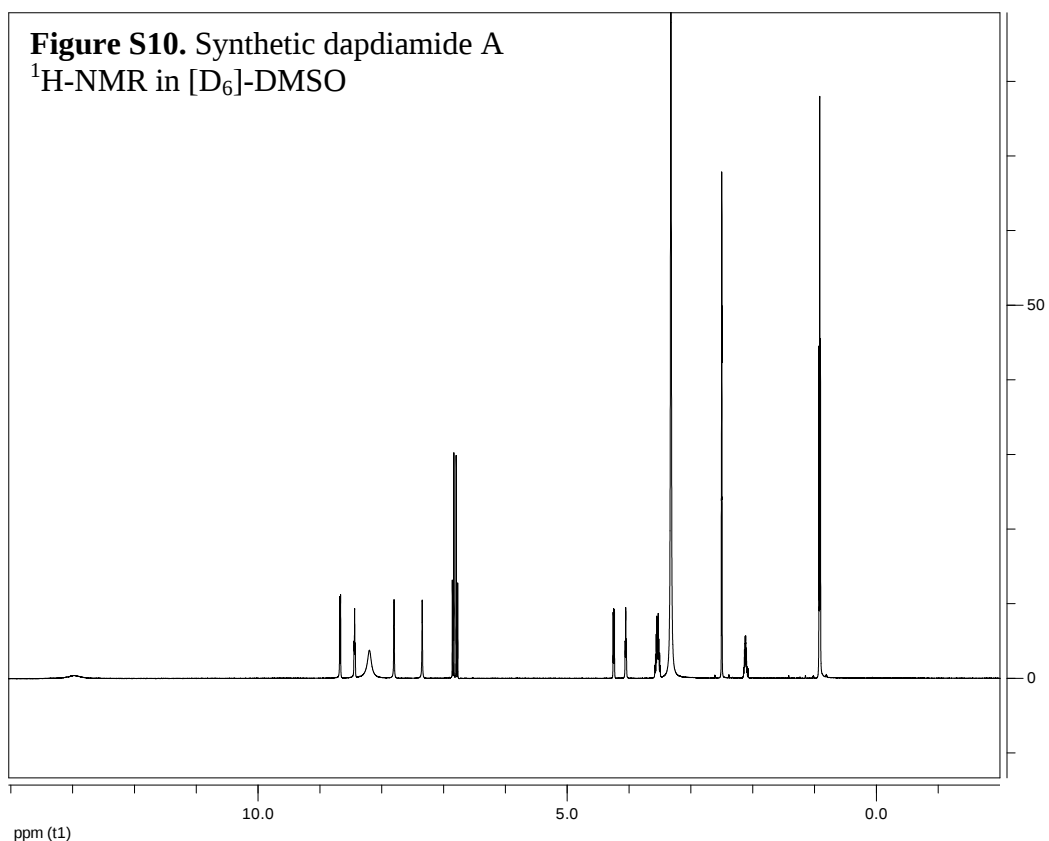


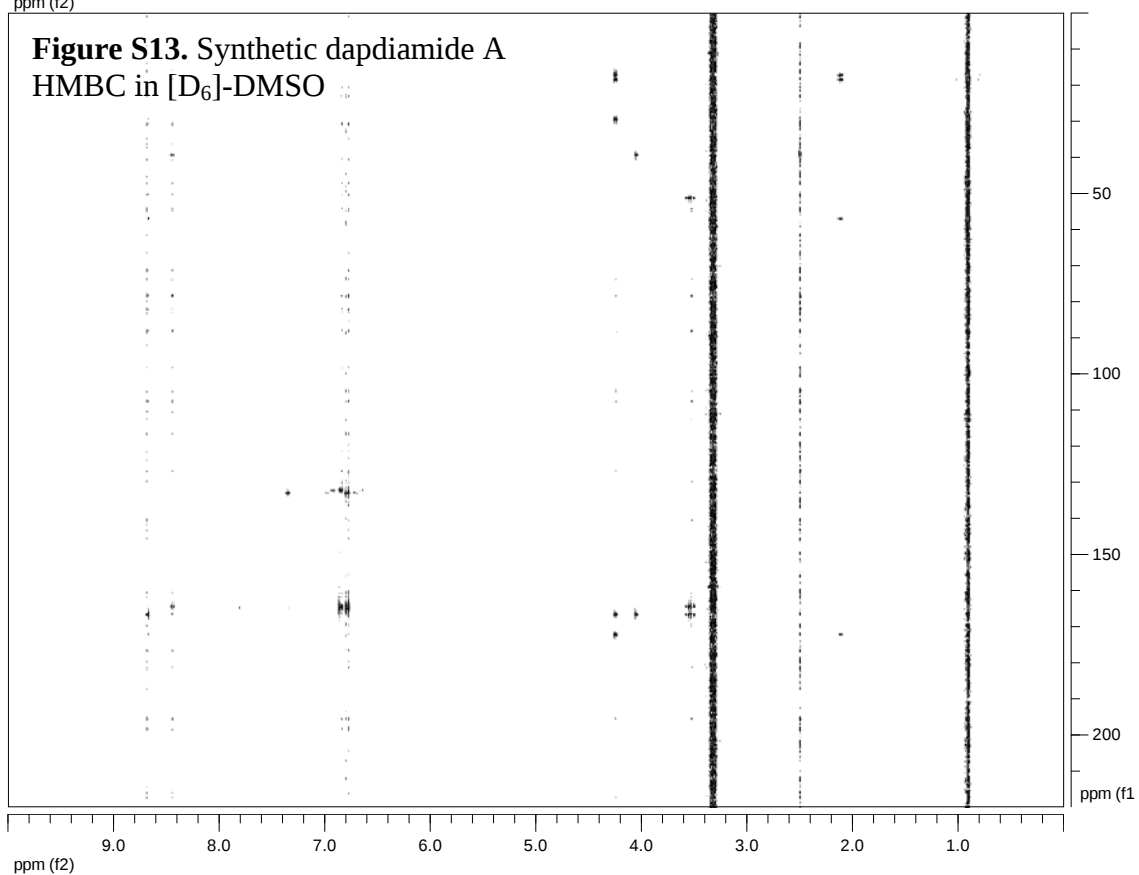
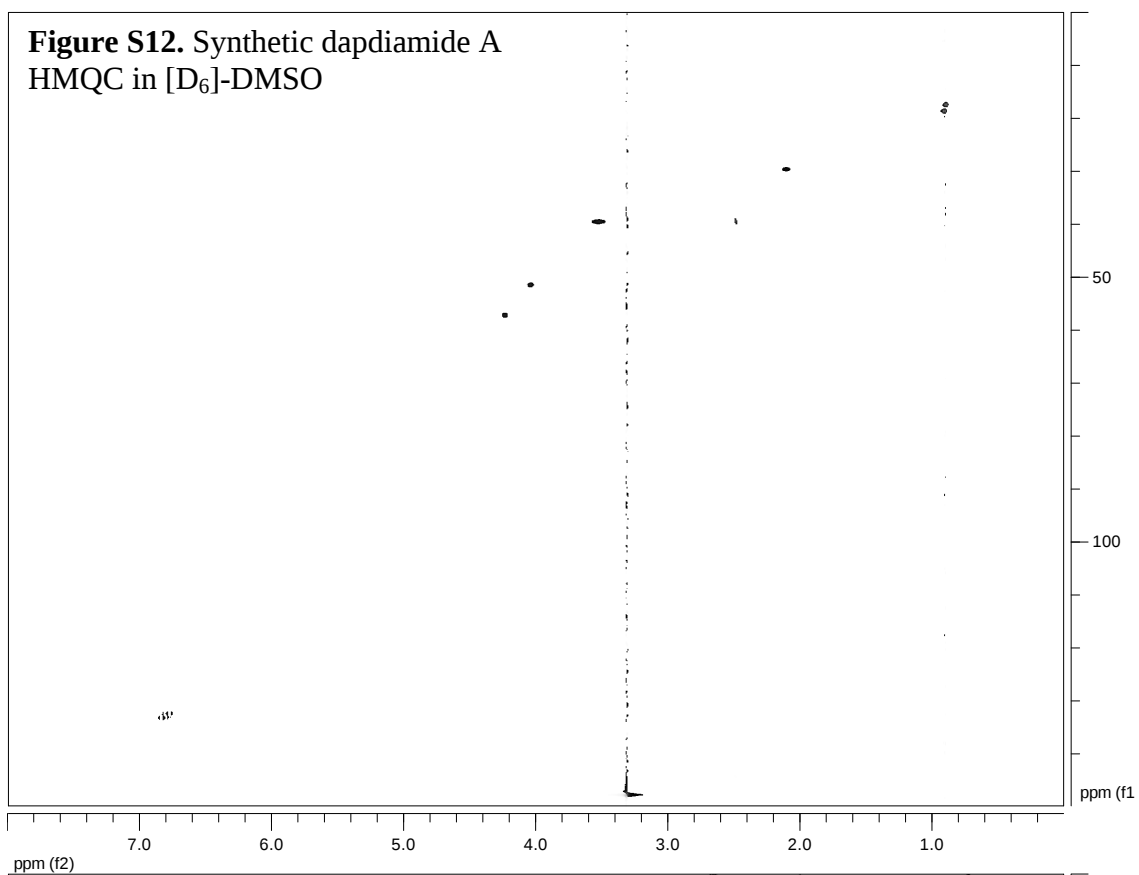


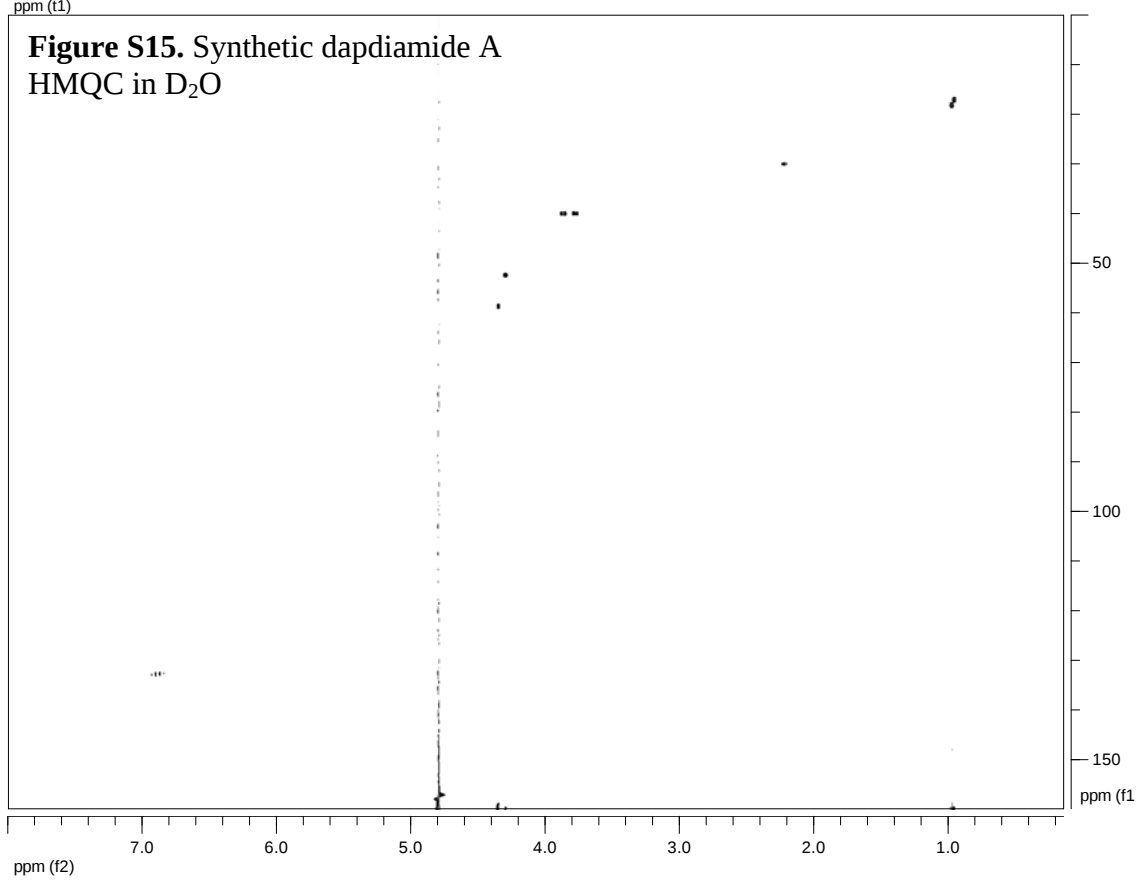
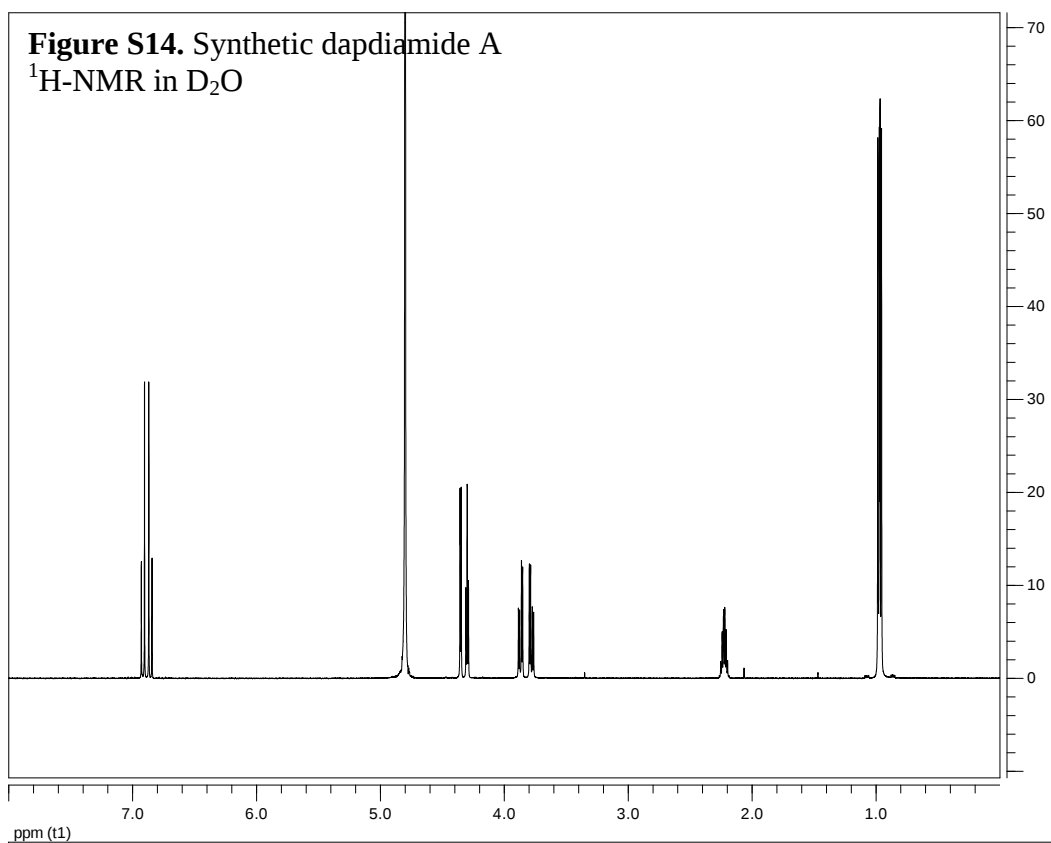


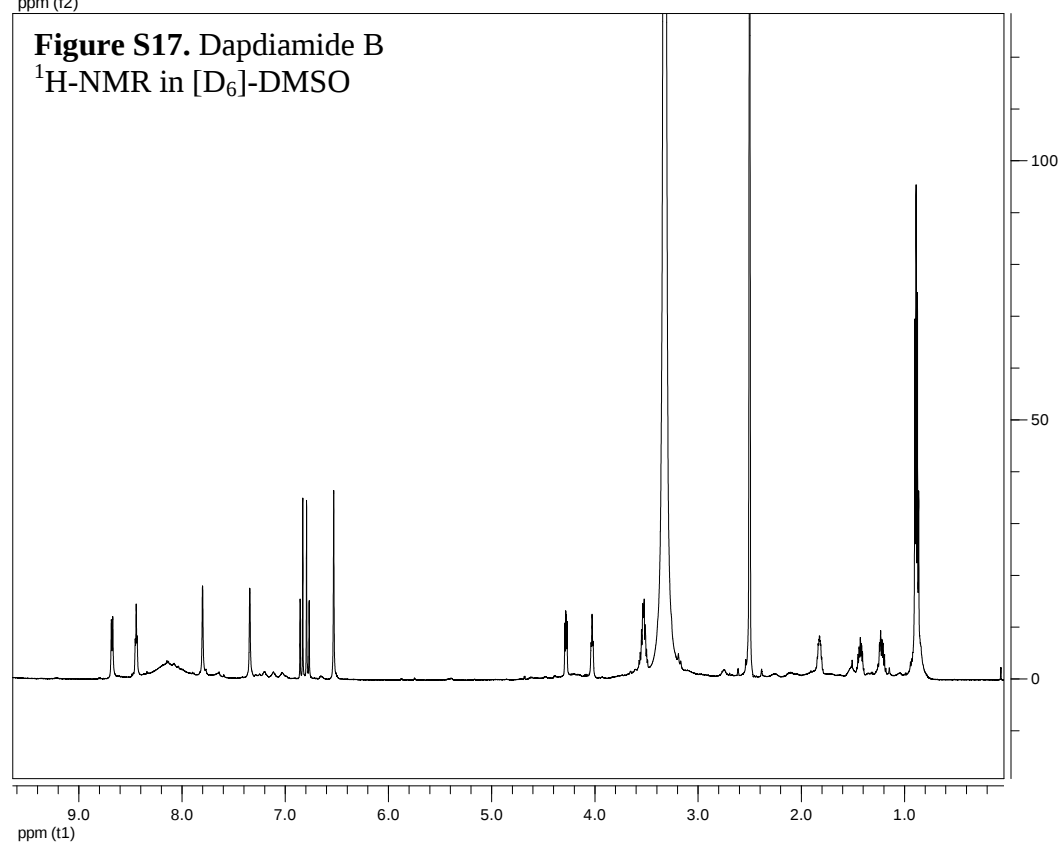
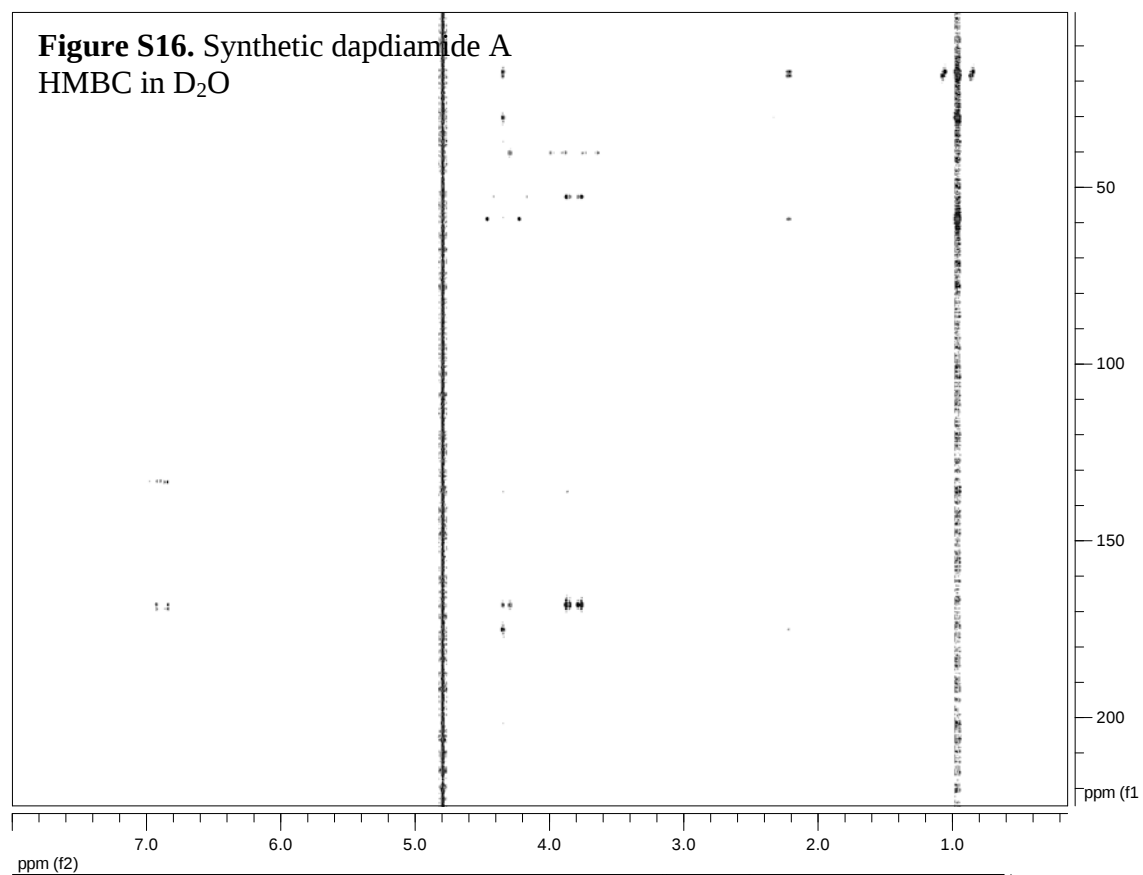


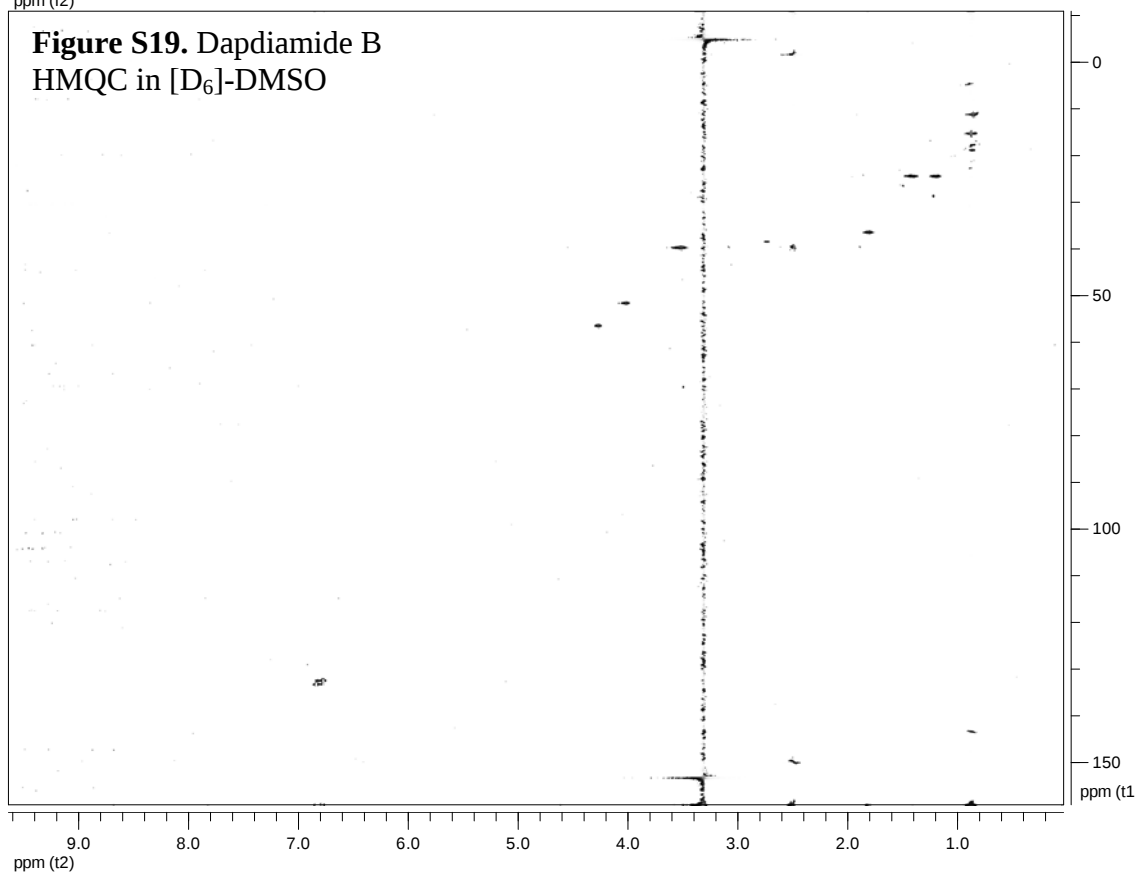
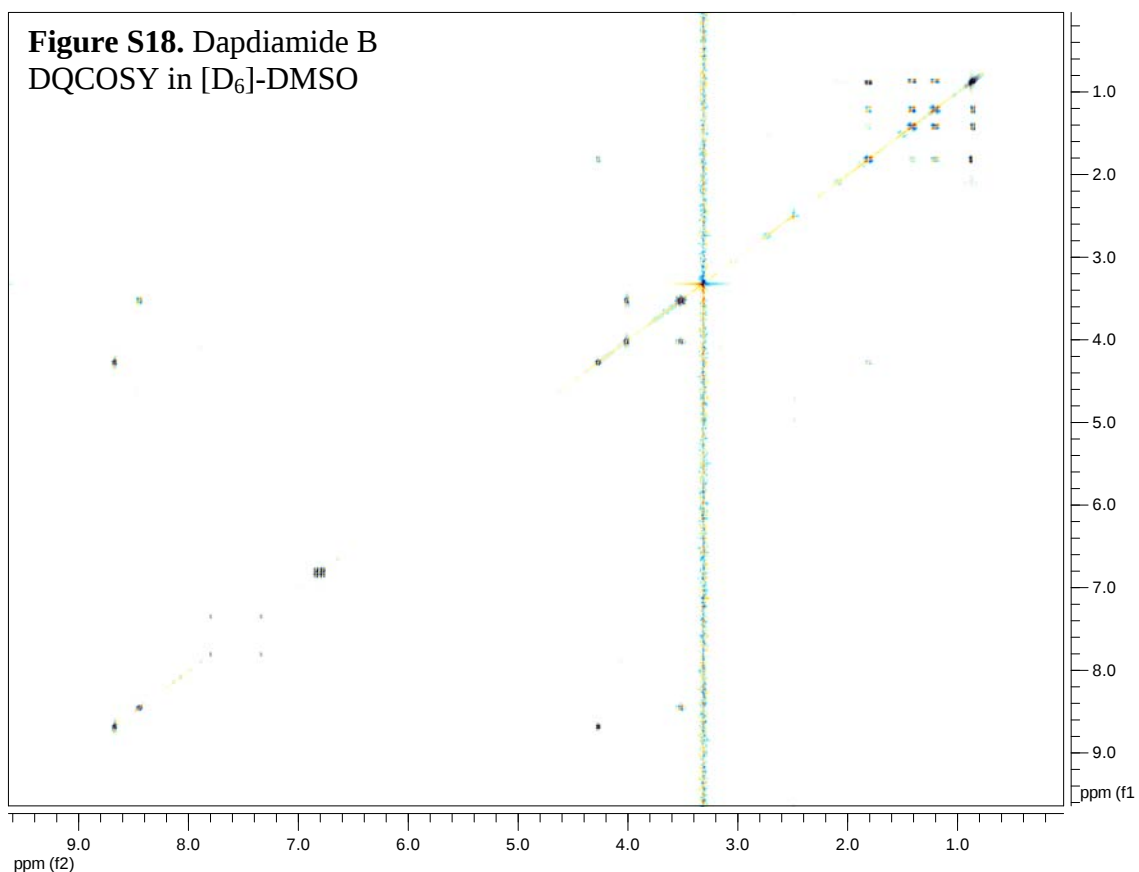


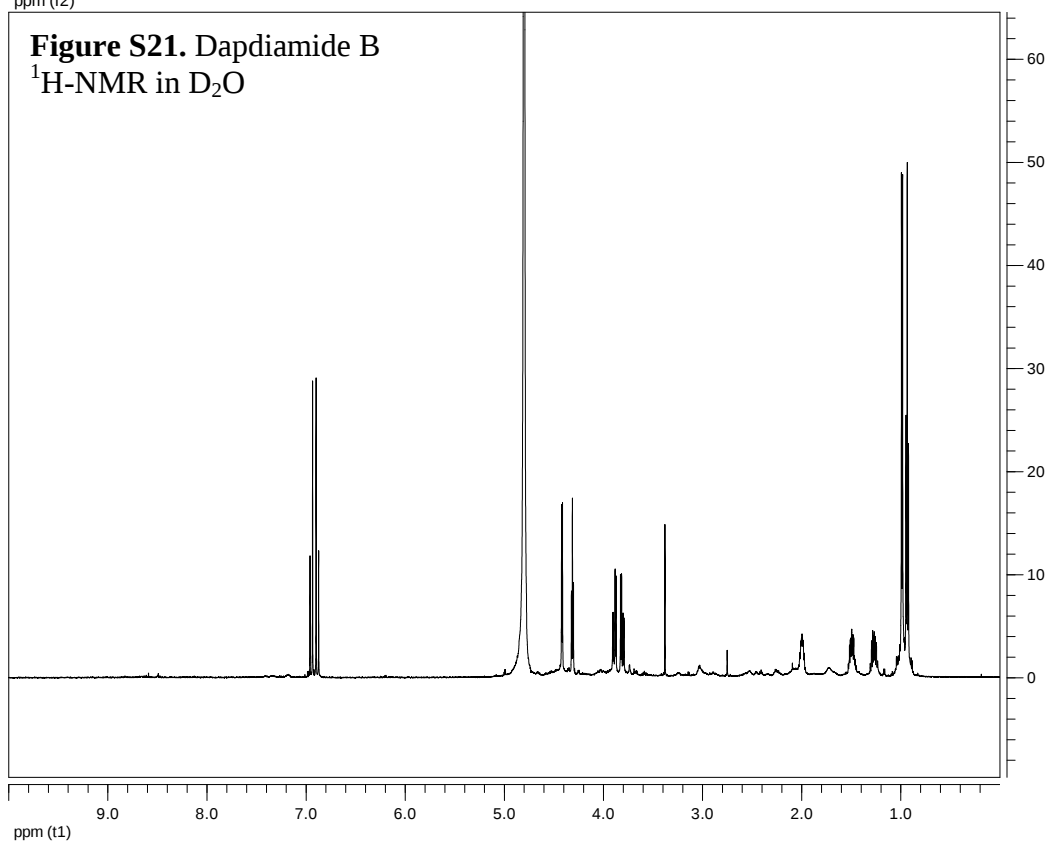
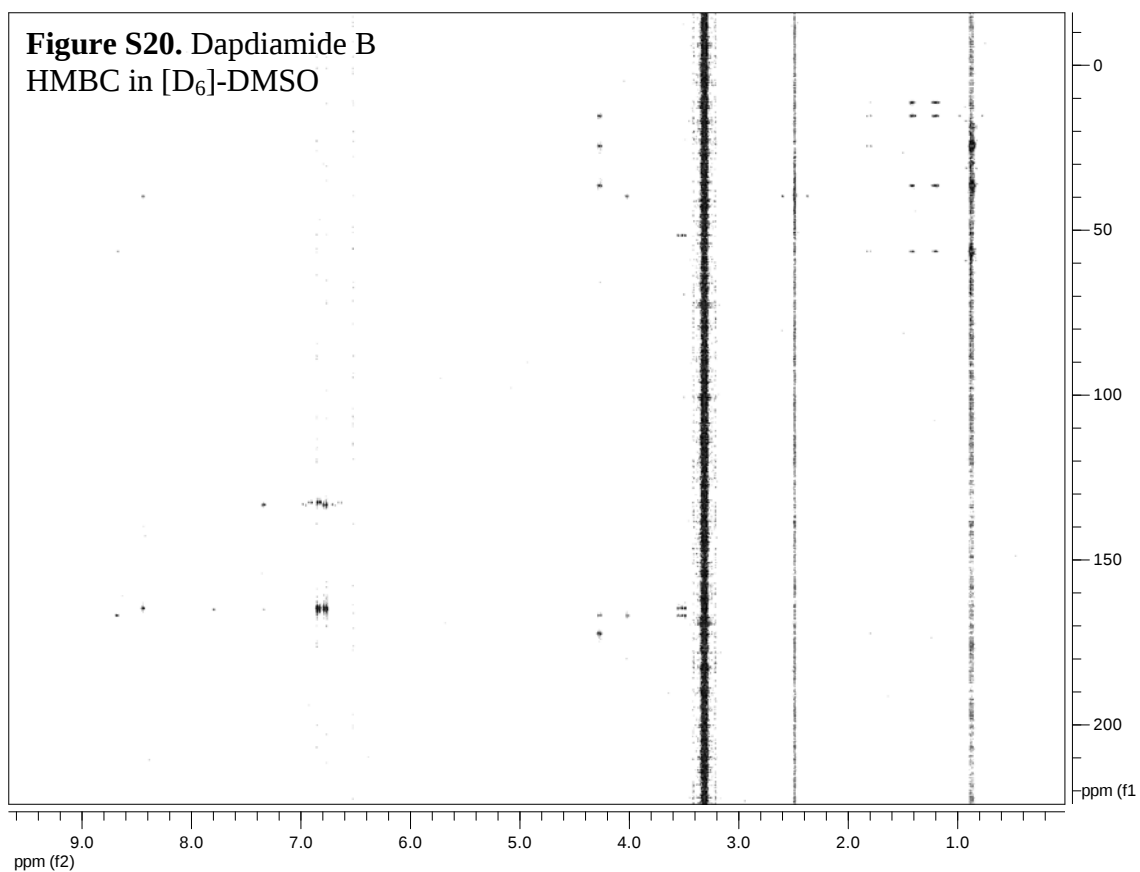


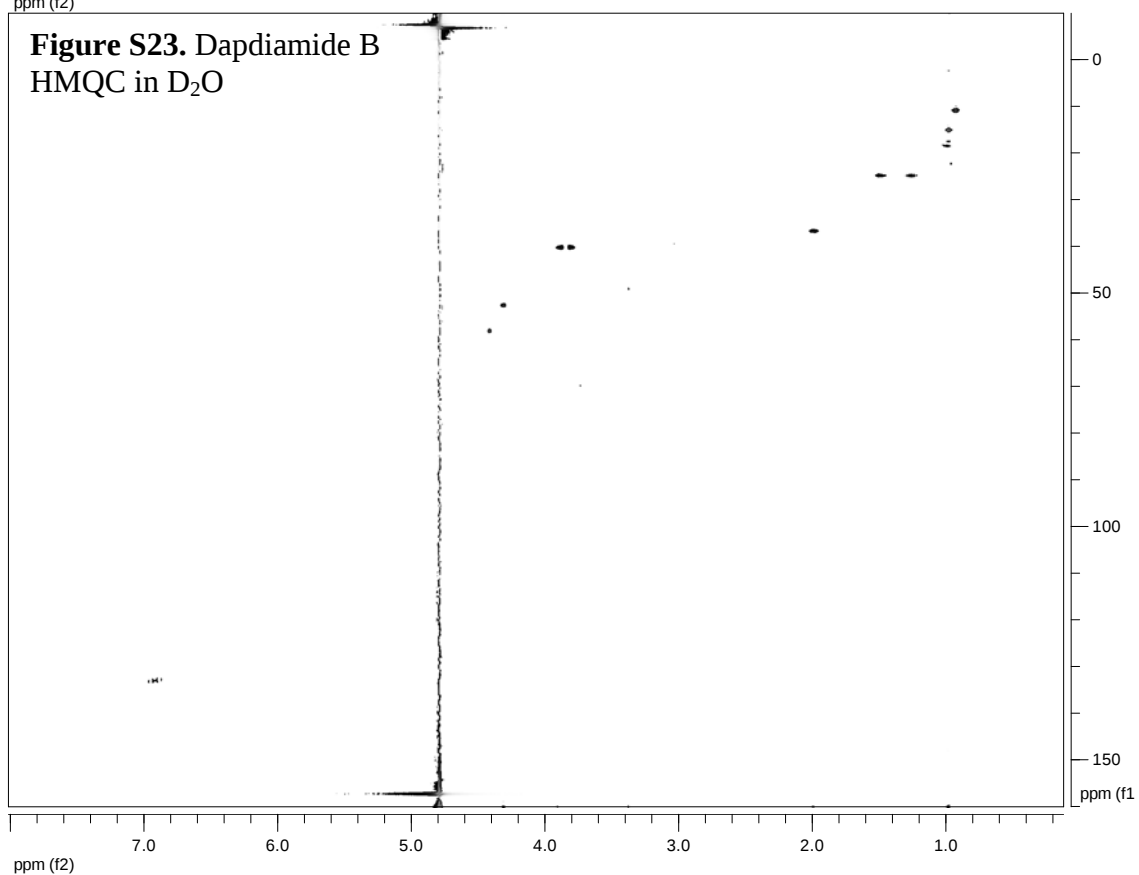
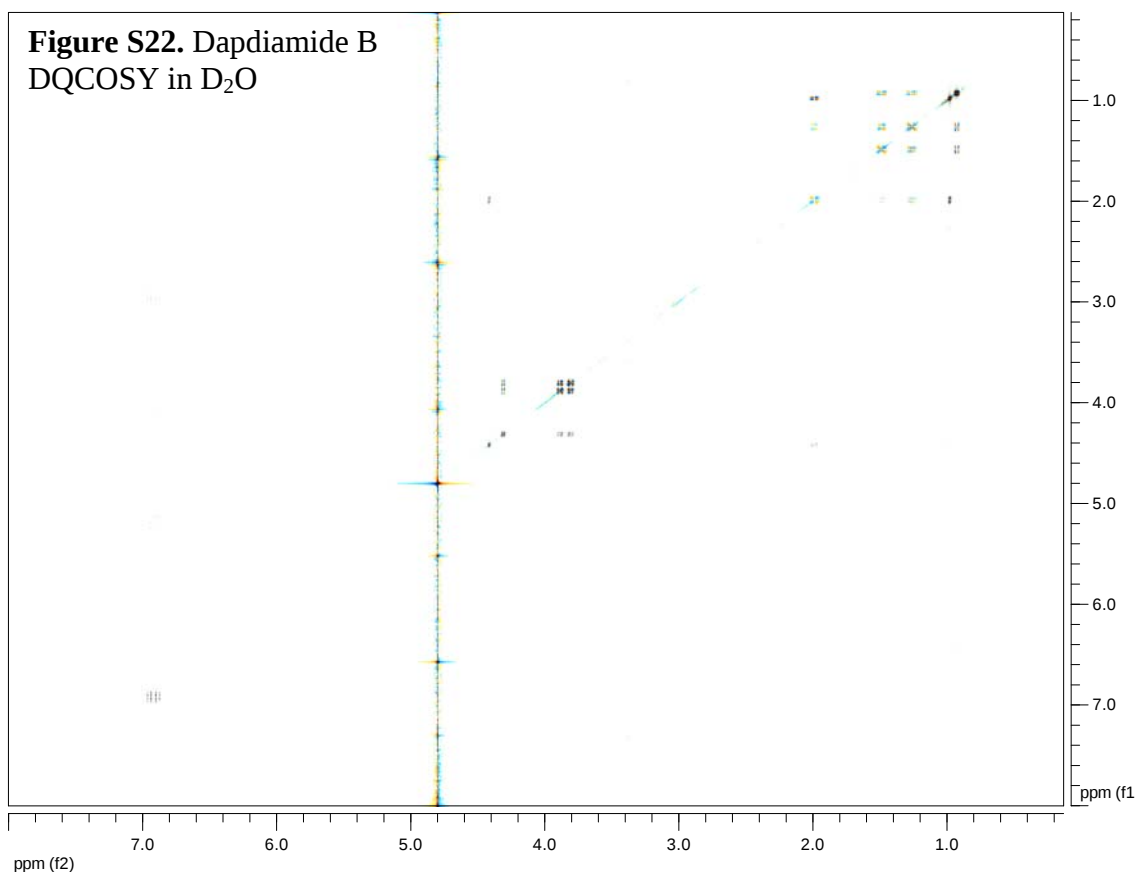


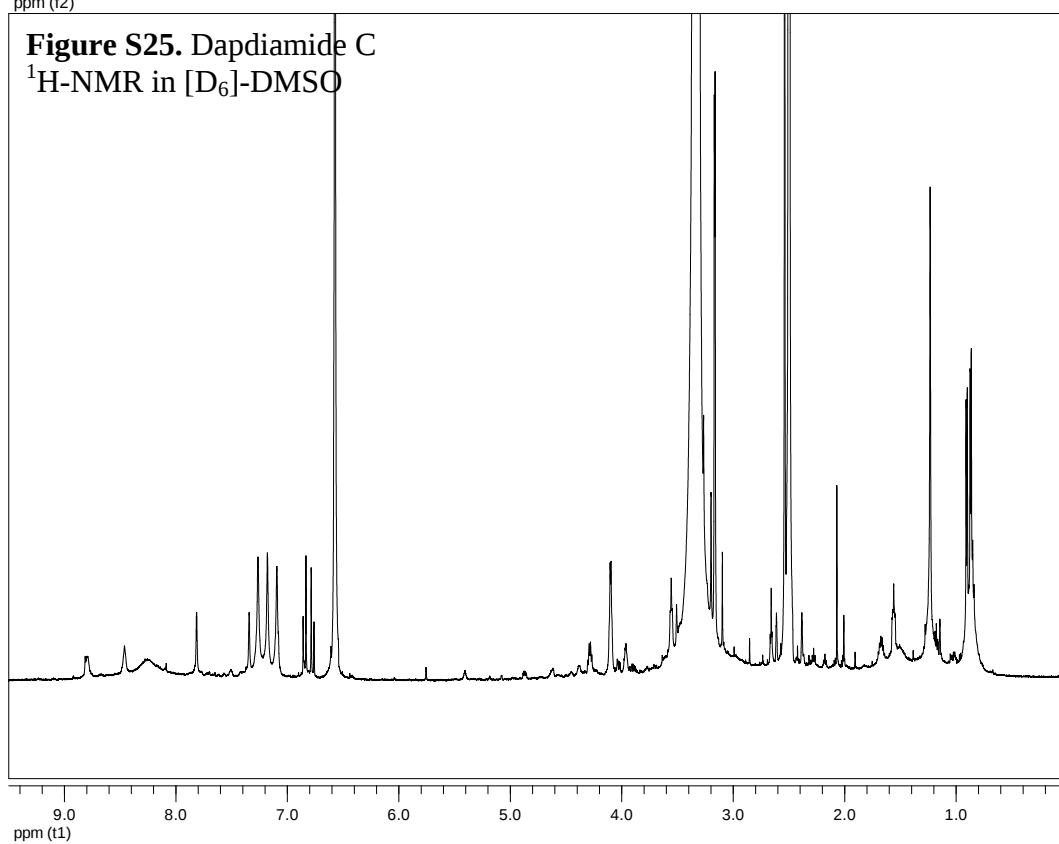
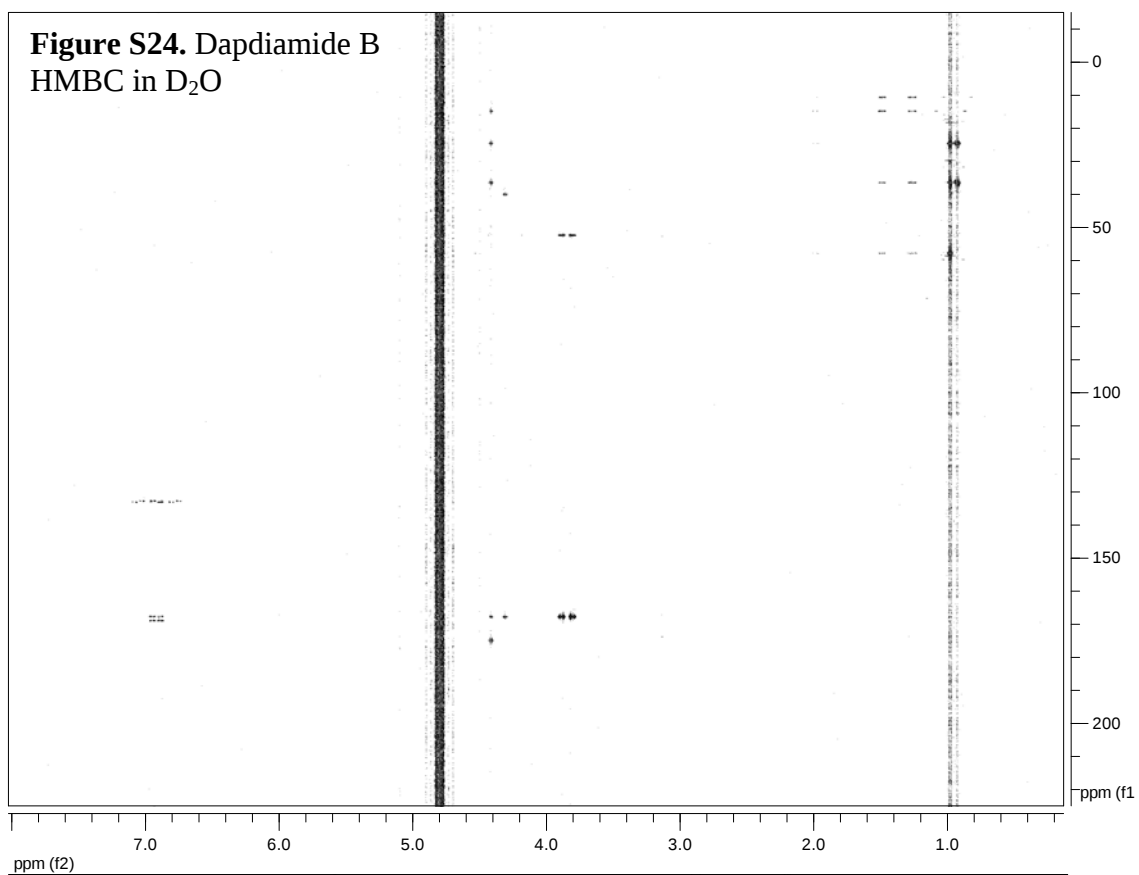


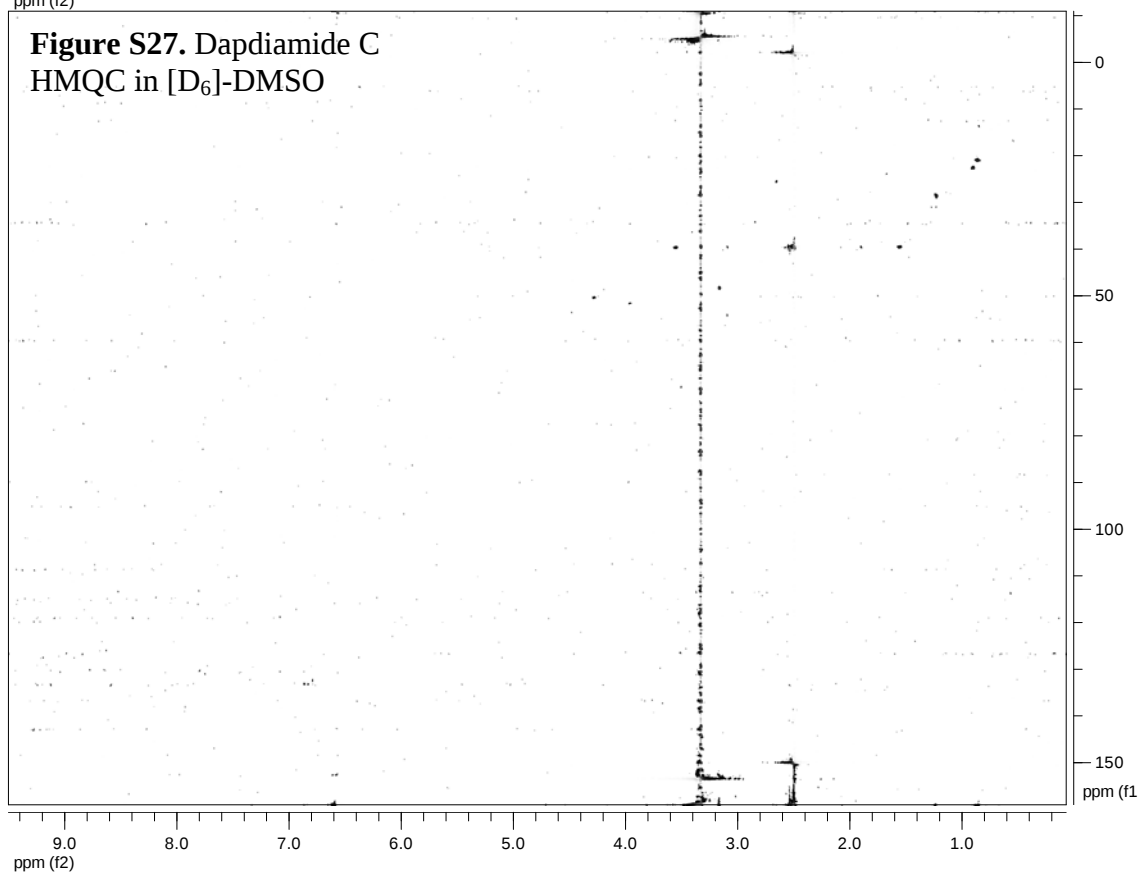
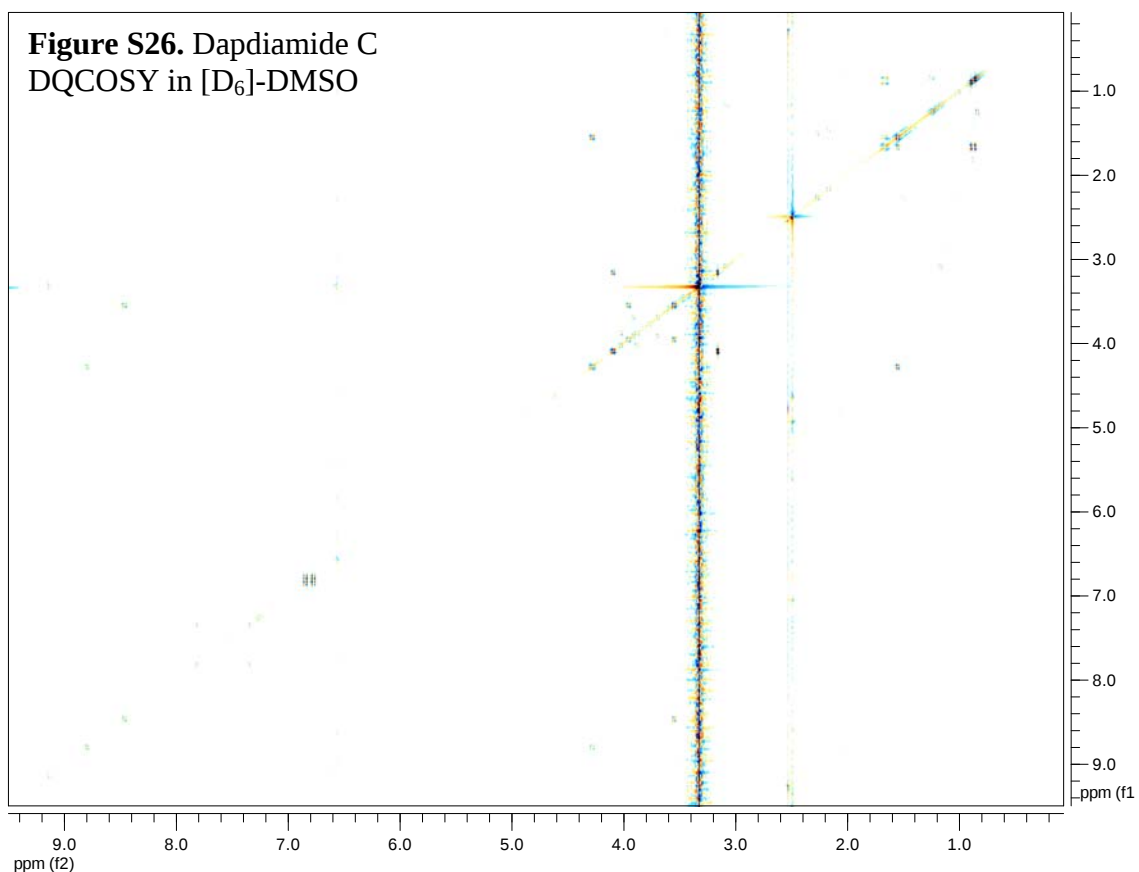


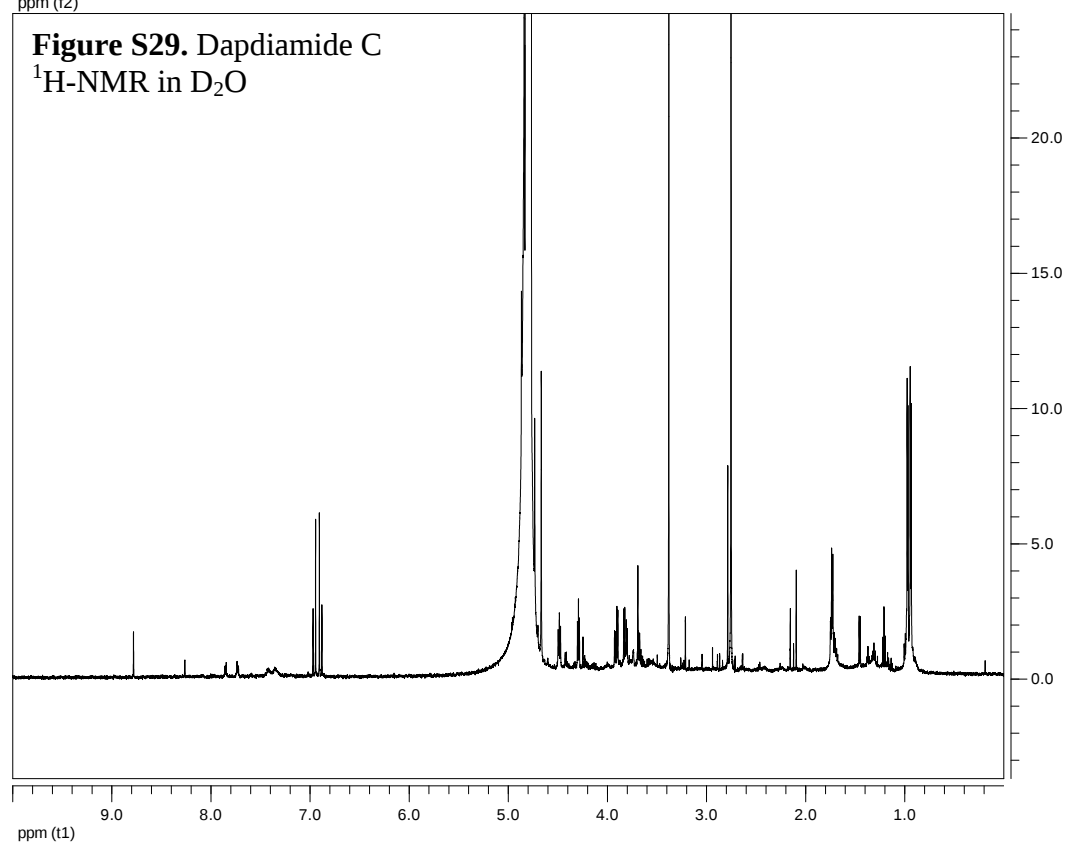
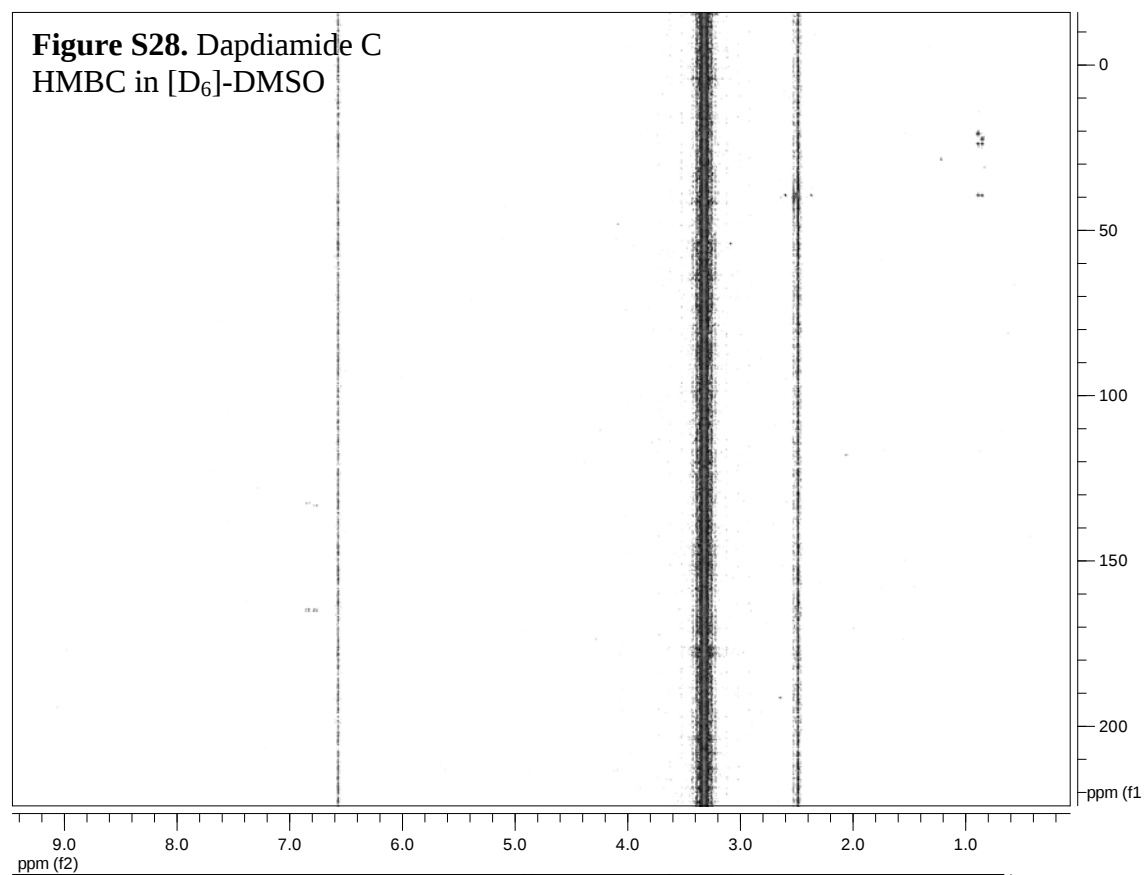


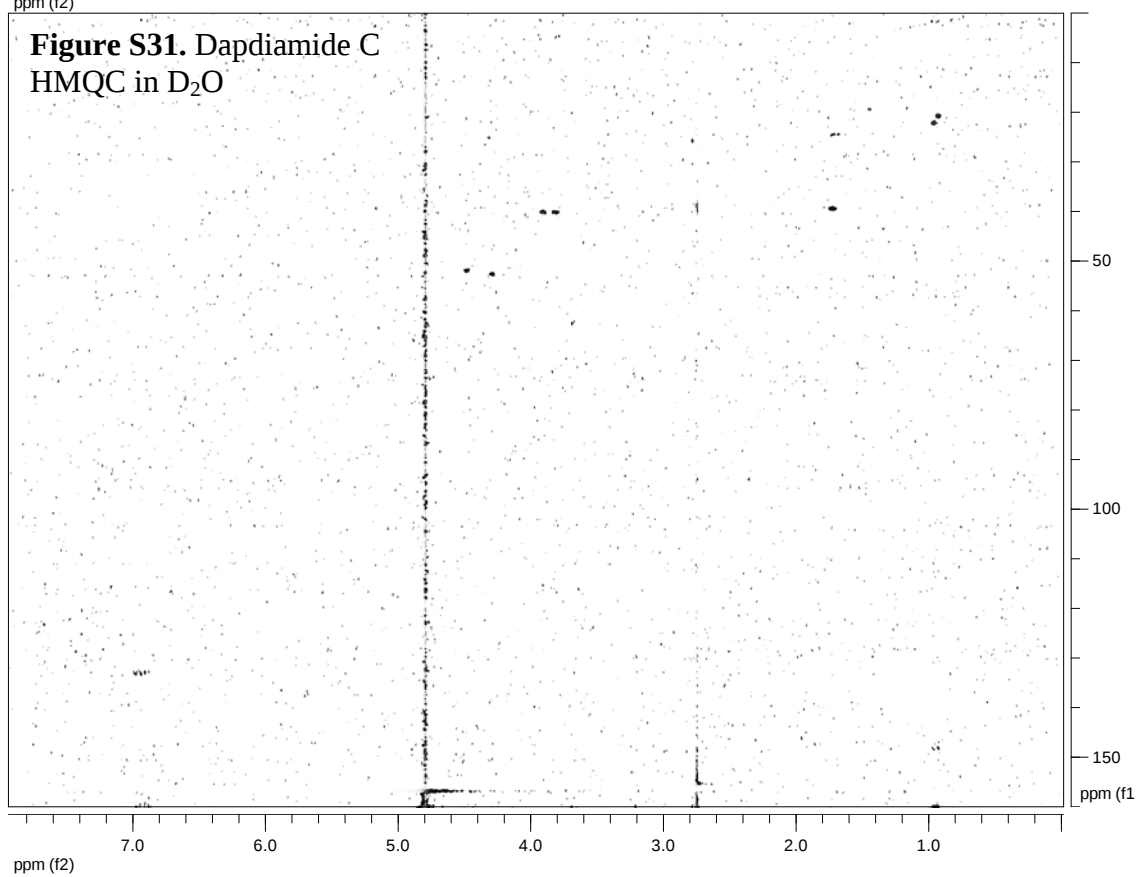
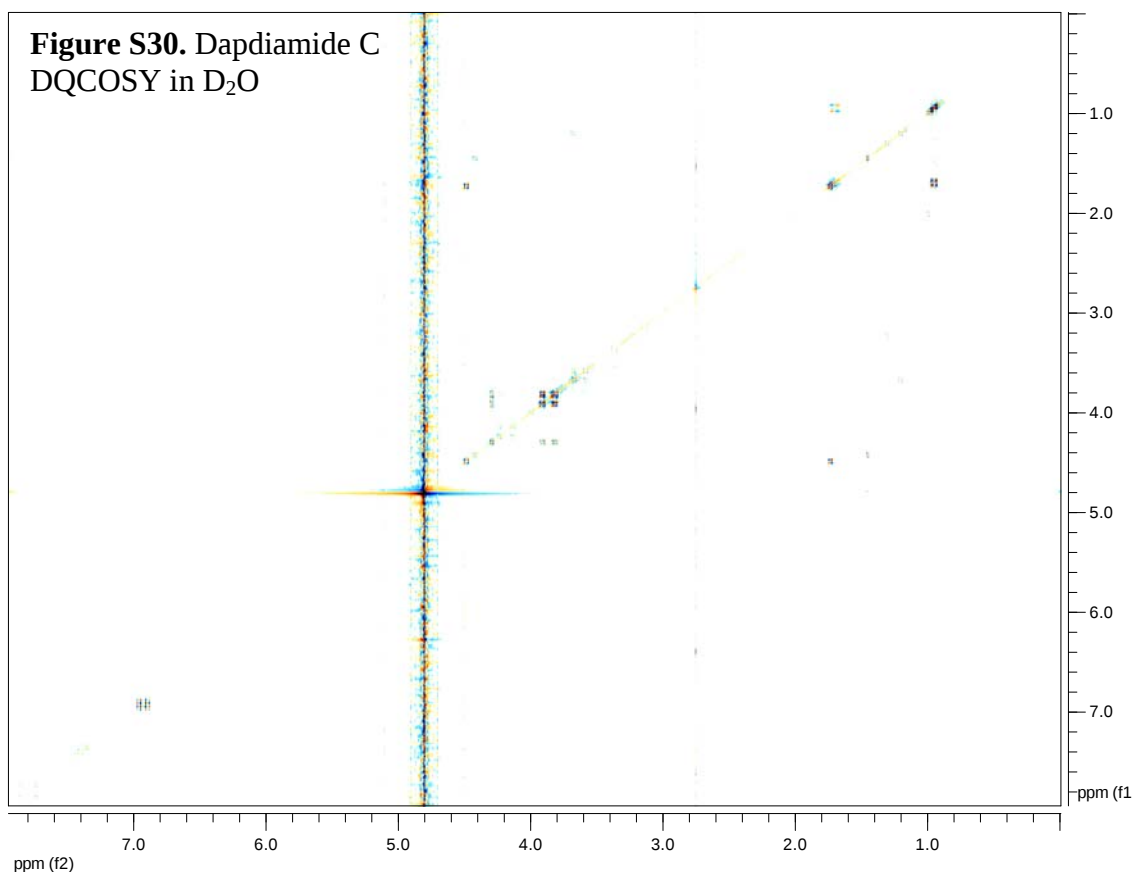


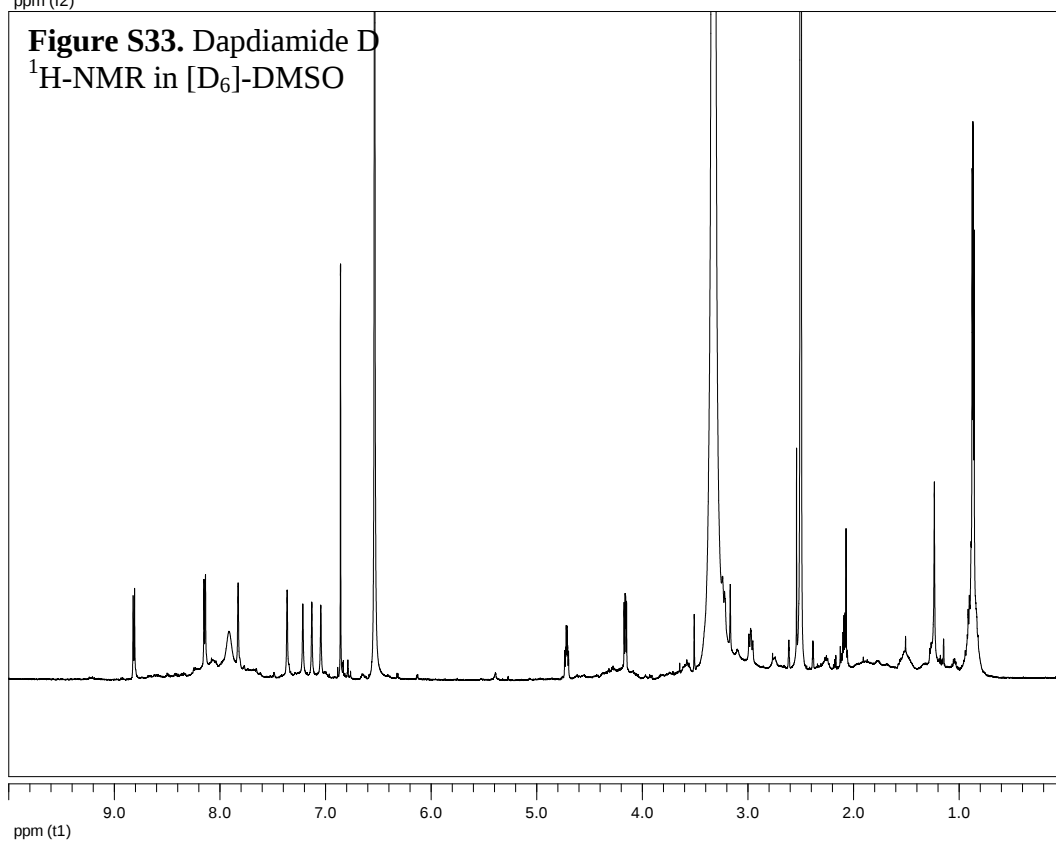
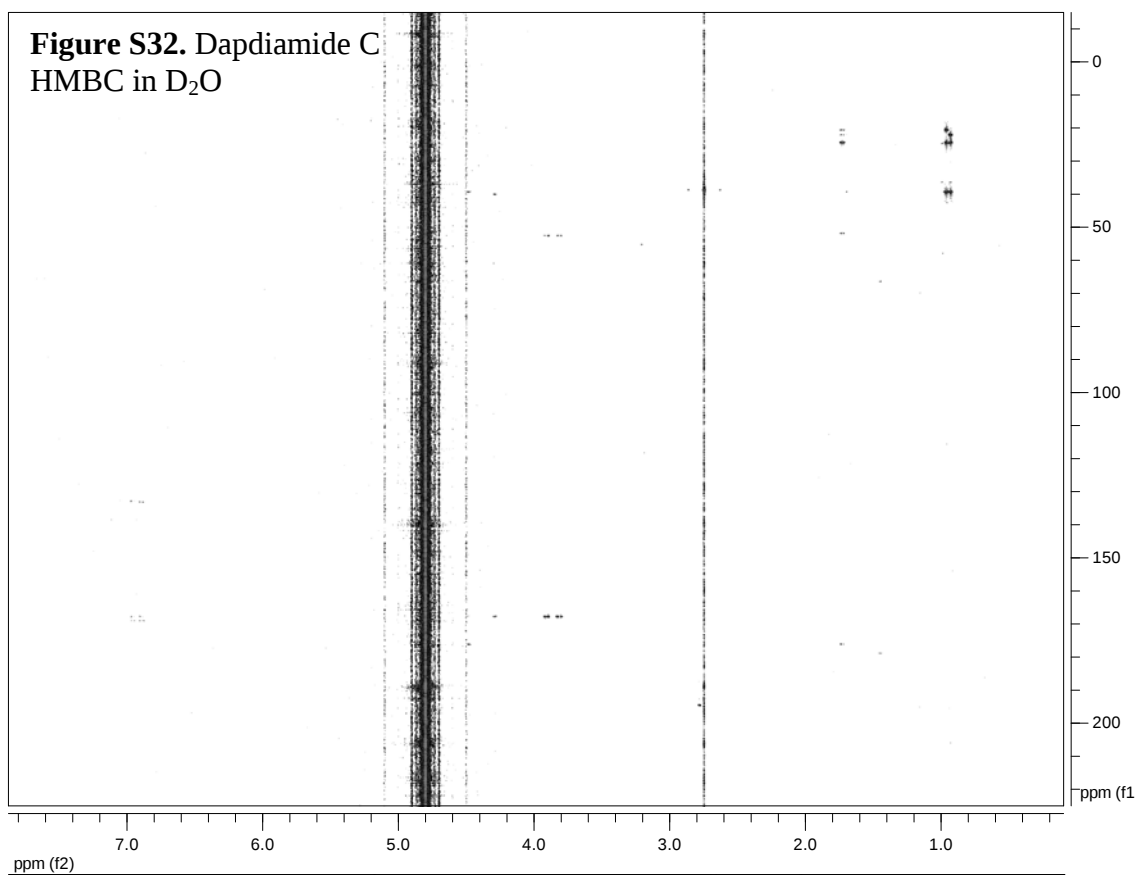


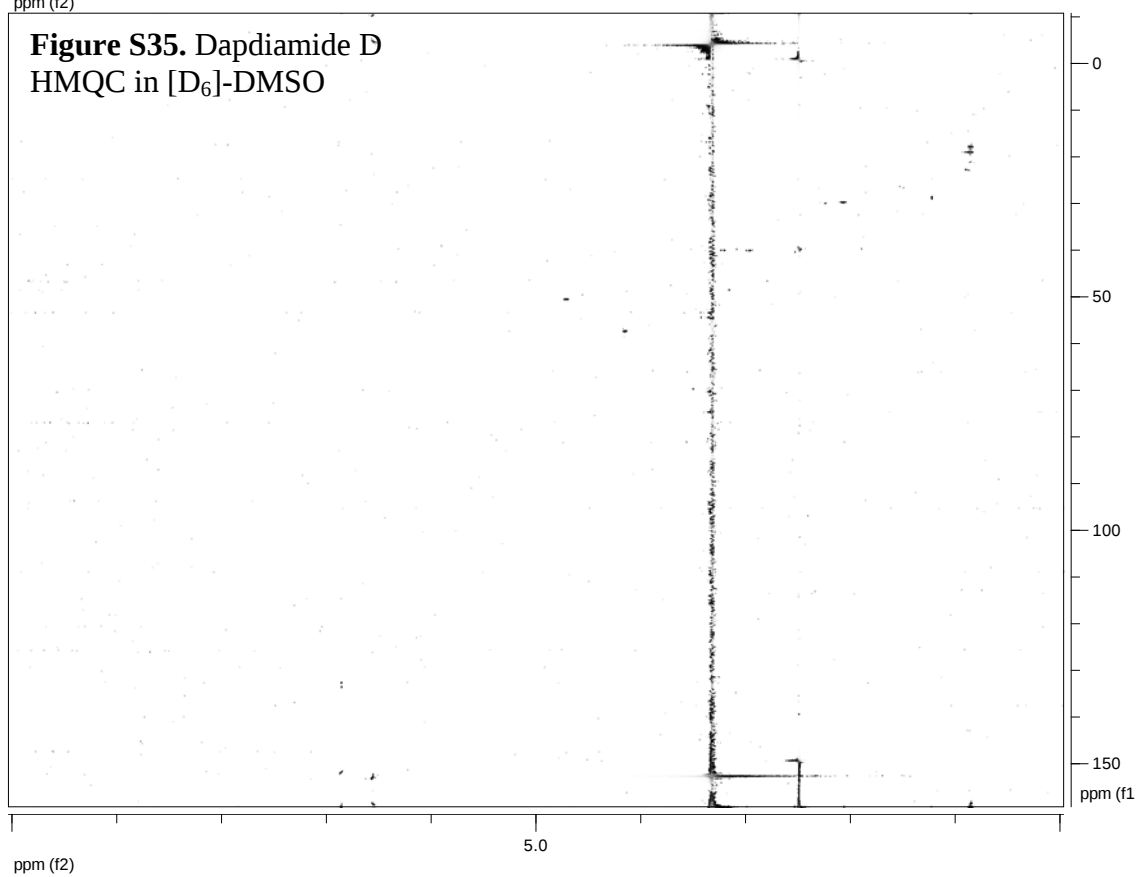
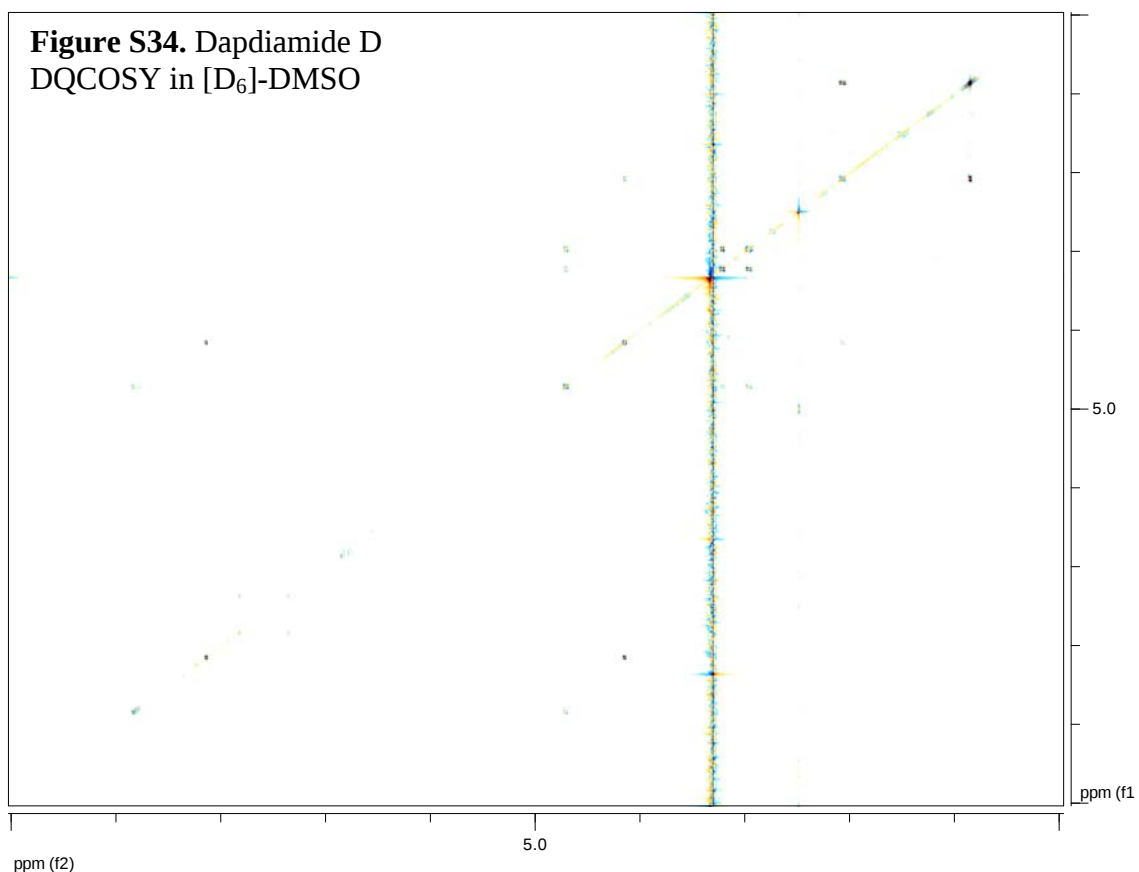


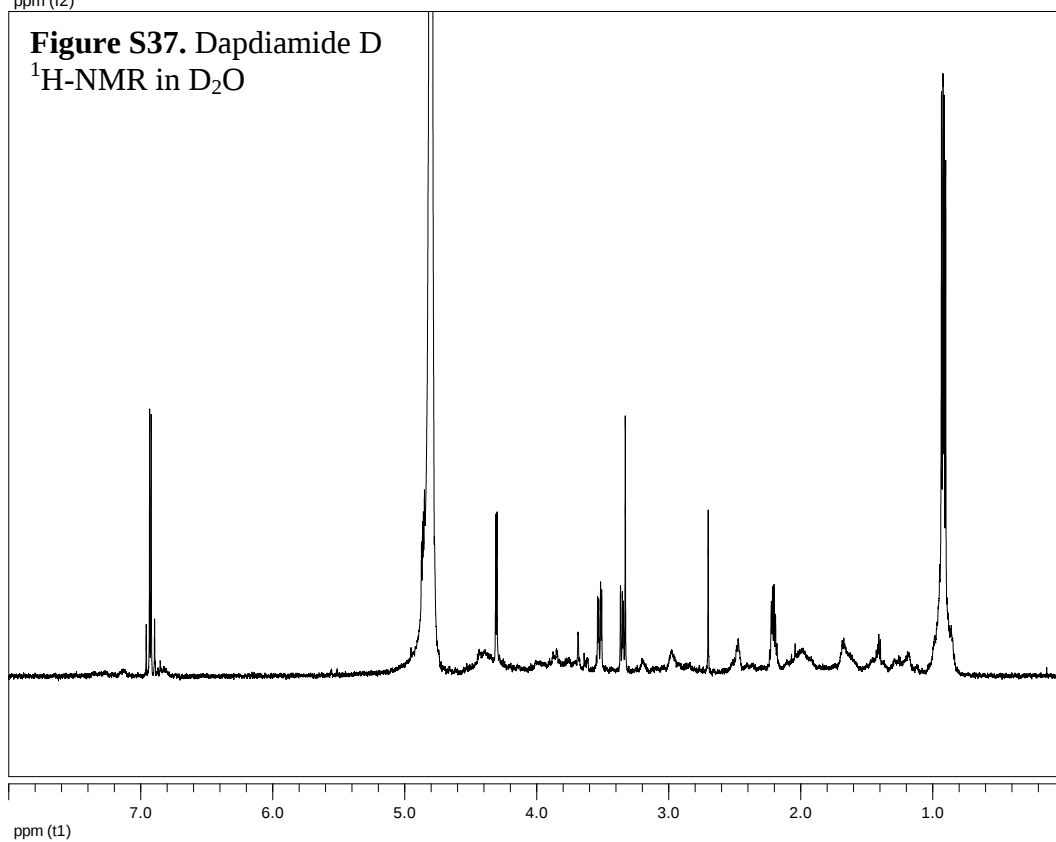
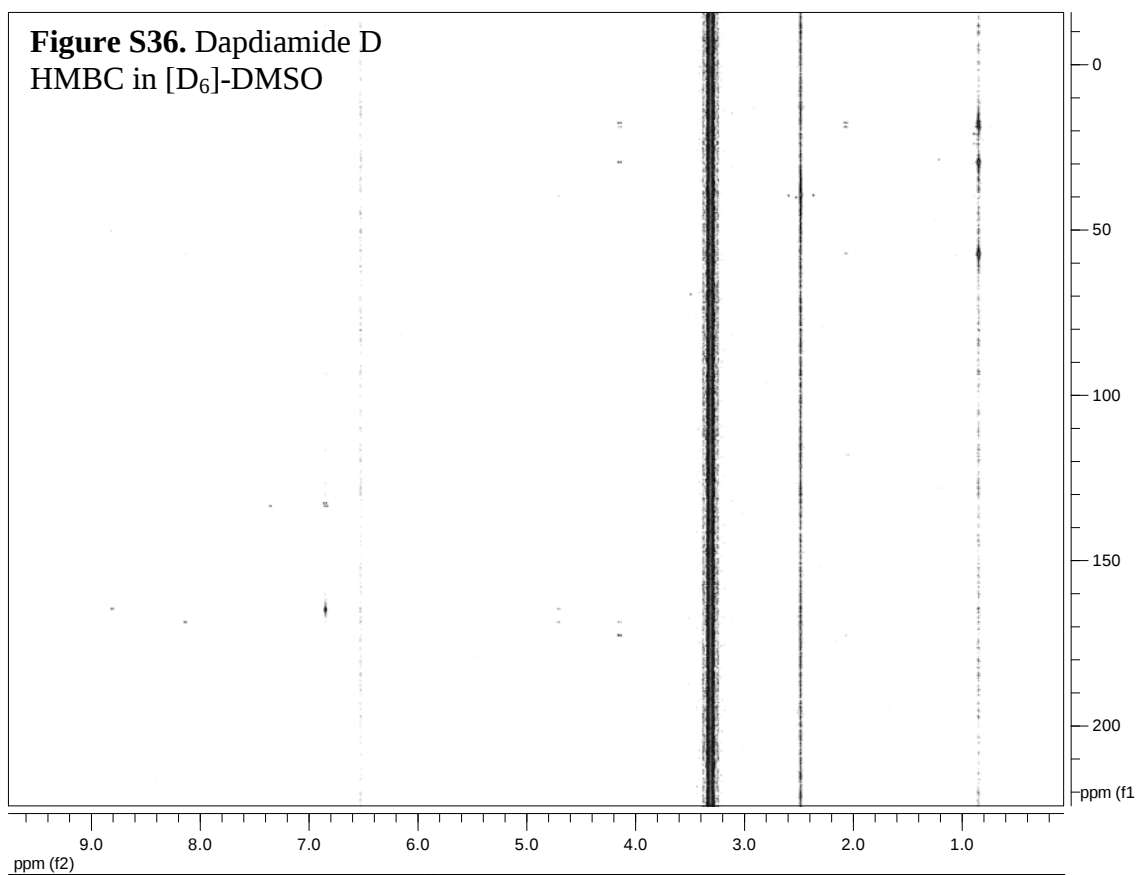


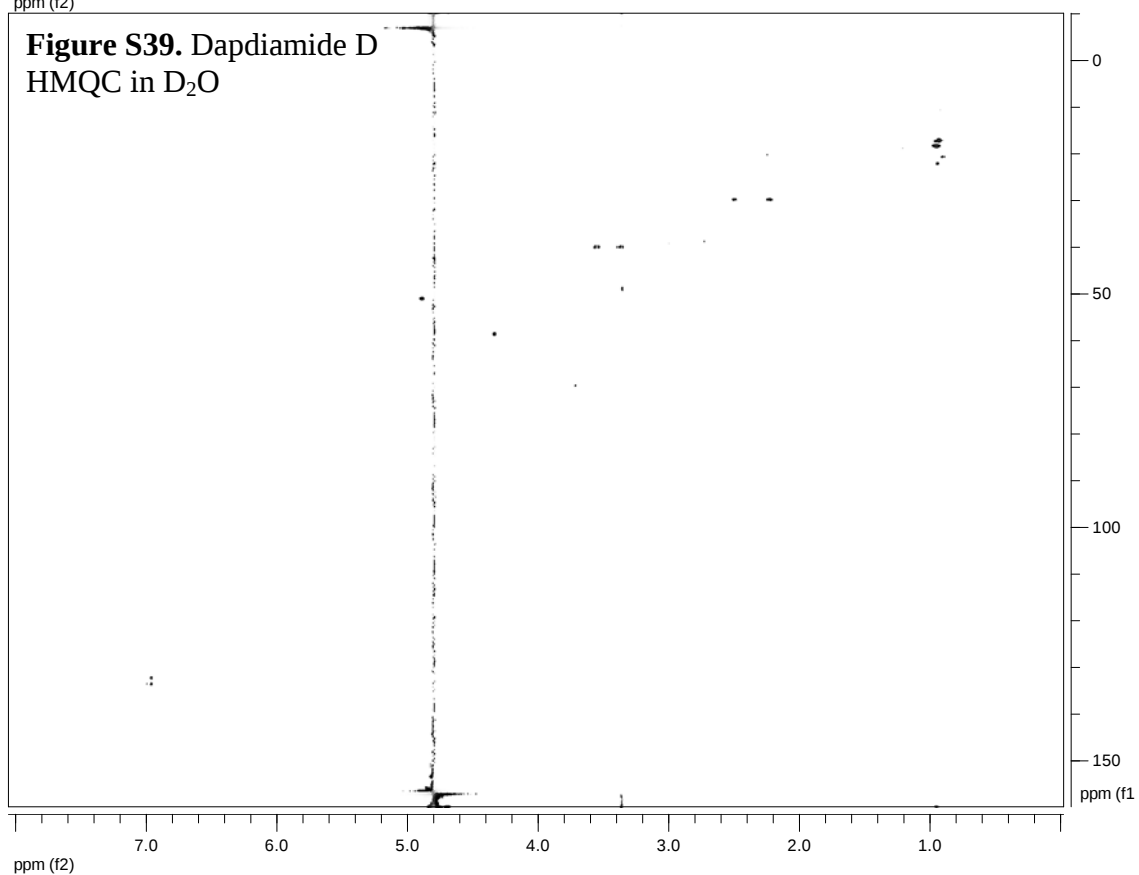
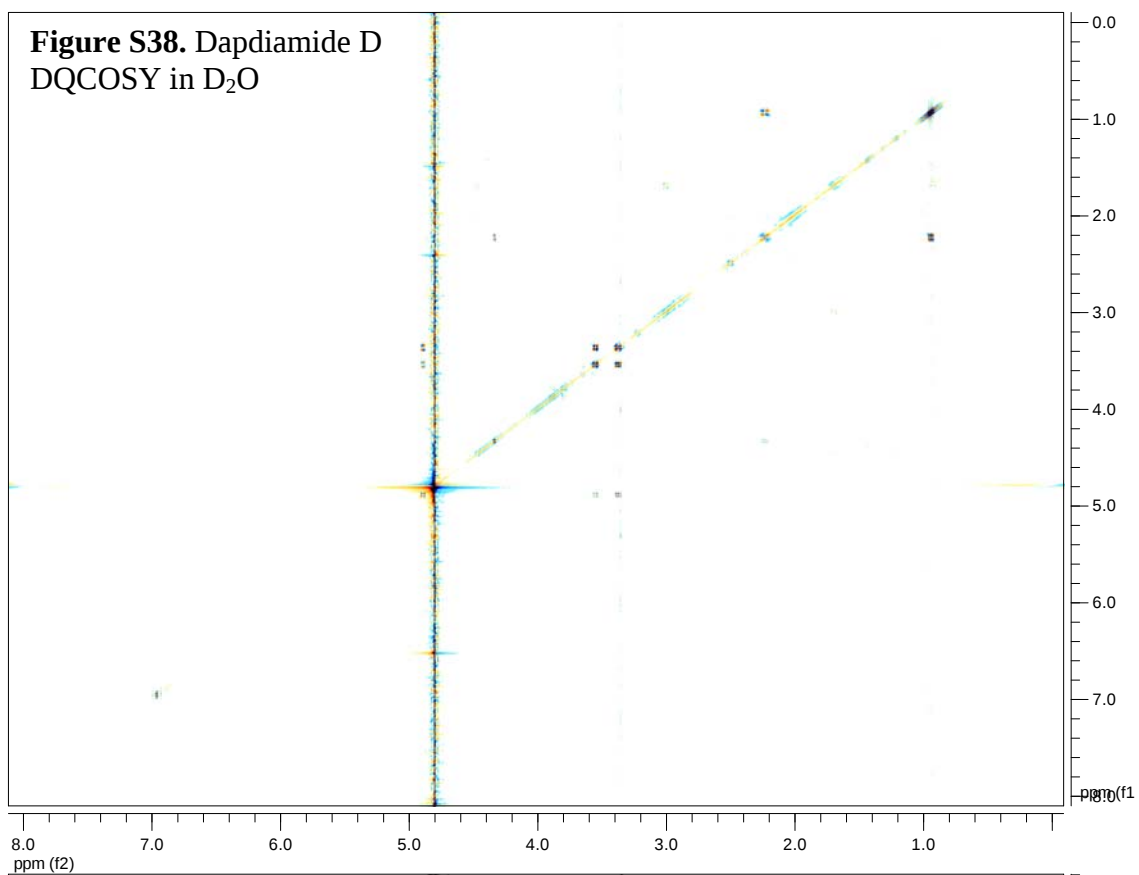












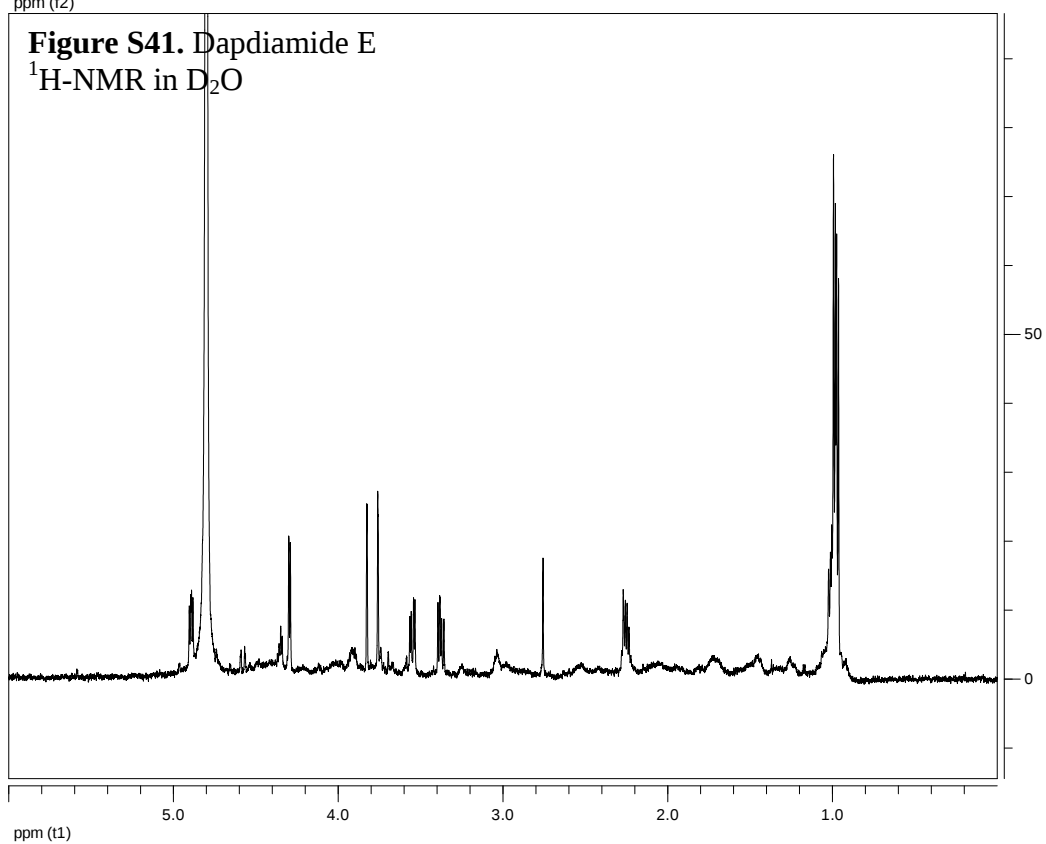
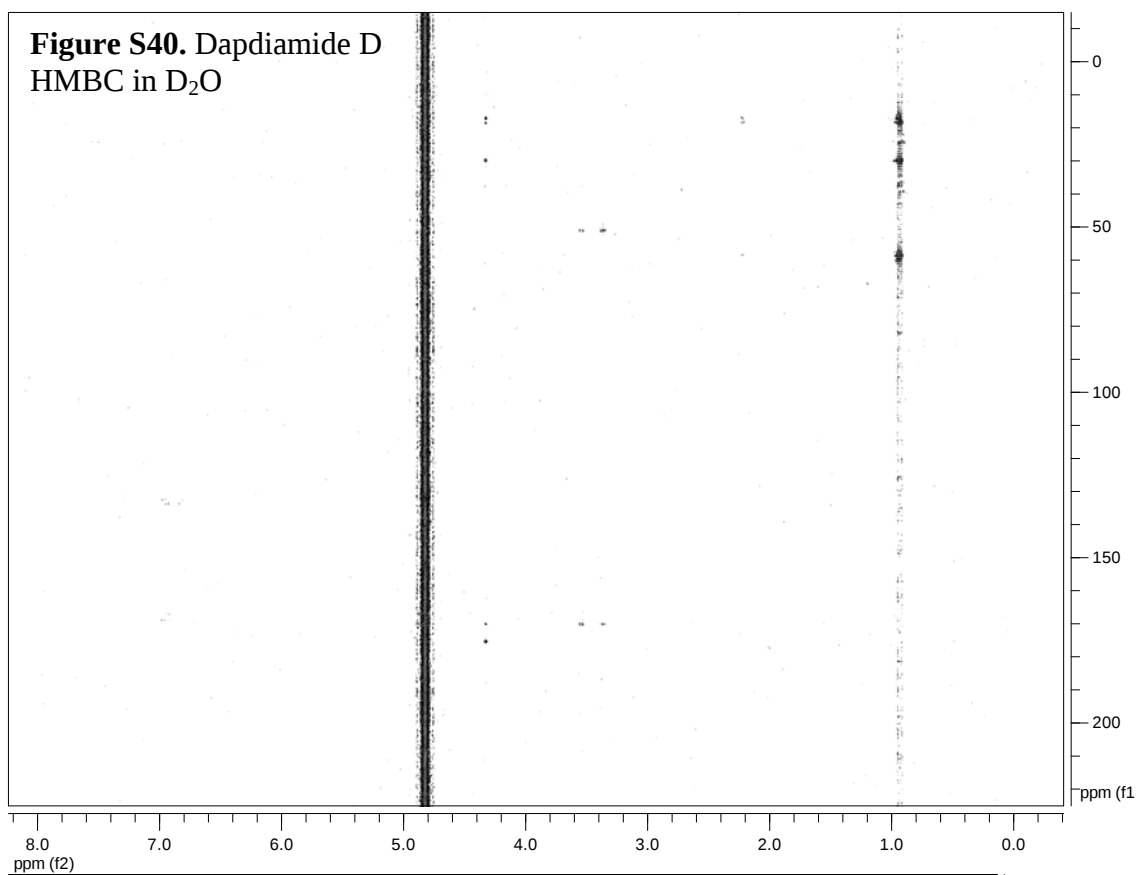


Figure S42. Dapdiamide E
DQCOSY in D₂O

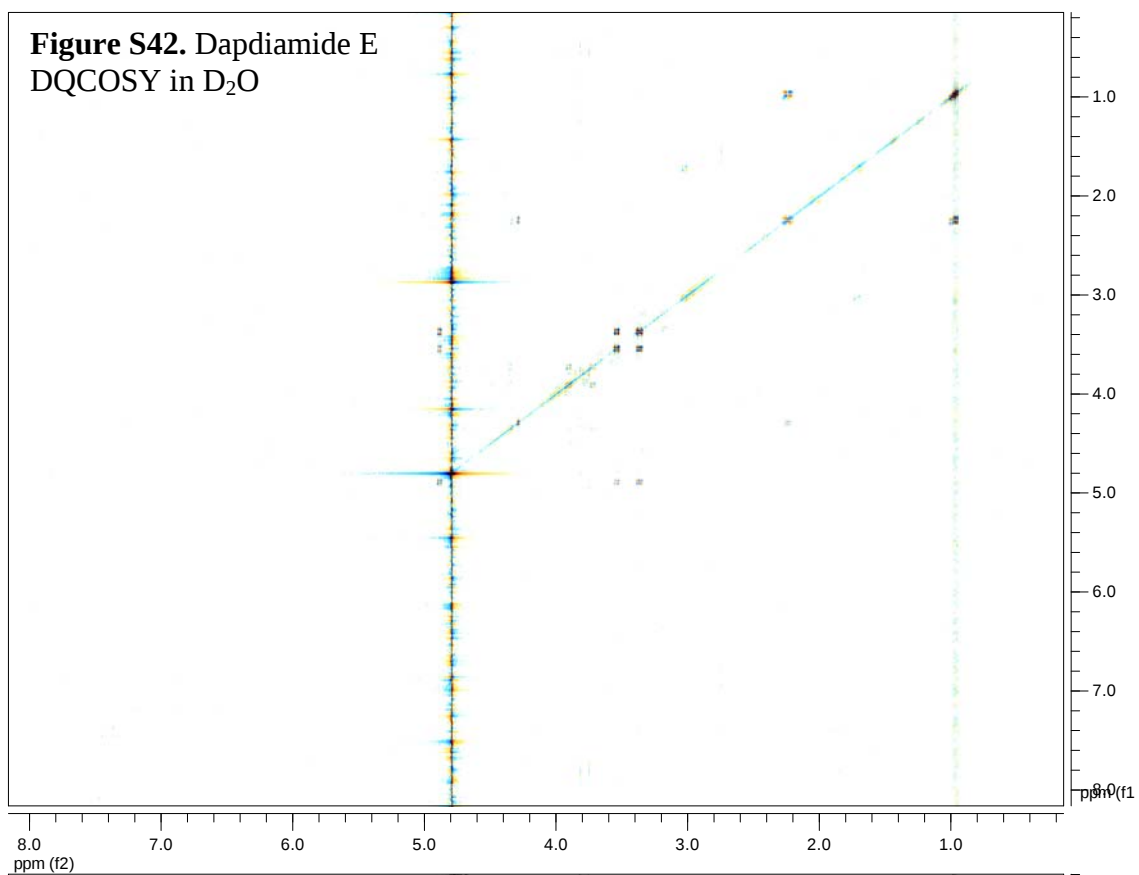


Figure S43. Dapdiamide E
HMQC in D₂O

