

# REPORT DOCUMENTATION PAGE

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<b>1. REPORT DATE (DD-MM-YYYY)</b>		<b>2. REPORT TYPE</b> Technical Papers		<b>3. DATES COVERED (From - To)</b>	
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				<b>5b. GRANT NUMBER</b>	
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<b>a. REPORT</b>	<b>b. ABSTRACT</b>	<b>c. THIS PAGE</b>			Leilani Richardson
Unclassified	Unclassified	Unclassified	A		<b>19b. TELEPHONE NUMBER</b> <i>(include area code)</i> (661) 275-5015

62

separate items are enclosed

MEMORANDUM FOR PRS (In-House/Contractor Publication)

FROM: PROI (TI) (STINFO)

10 October 2000

SUBJECT: Authorization for Release of Technical Information, Control Number: **AFRL-PR-ED-AB-2000-190**  
Suri, Suresh; Tinnirello, Michael (ERC); Marcischak, Jacob (ERC), "Synthesis and Screening of Advanced Hydrocarbon Fuels"

**HEDM Contractors Conference (Park City, UT, 23-26 Oct 2000)**  
**(Deadline: 27 Sep 2000 - PAST DUE)**

(Statement A)

1. This request has been reviewed by the Foreign Disclosure Office for: a.) appropriateness of distribution statement, b.) military/national critical technology, c.) export controls or distribution restrictions, d.) appropriateness for release to a foreign nation, and e.) technical sensitivity and/or economic sensitivity.

Comments: \_\_\_\_\_  
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Signature \_\_\_\_\_ Date \_\_\_\_\_

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3. This request has been reviewed by the STINFO for: a.) changes if approved as amended, b.) appropriateness of distribution statement, c.) military/national critical technology, d.) economic sensitivity, e.) parallel review completed if required, and f.) format and completion of meeting clearance form if required

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4. This request has been reviewed by PRS for: a.) technical accuracy, b.) appropriateness for audience, c.) appropriateness of distribution statement, d.) technical sensitivity and economic sensitivity, e.) military/national critical technology, and f.) data rights and patentability

Comments: \_\_\_\_\_  
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# Synthesis and Screening of Advanced Hydrocarbon Fuels

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At AFRL/PRSP research efforts have been directed towards high-density saturated/unsaturated strained ring hydrocarbons. The theoretical specific impulse (Isp) calculation reflected that hydrocarbons AFRL-1 (Isp = 311.4 sec), AFRL-2 (Isp = 307 sec), AFRL-3 (Isp = 307.2 sec), AFRL-4 (Isp = 321 sec) and AFRL-5 (Isp = 308.7 sec) outperform the current candidates. The synthesis of AFRL-1, AFRL-3 and AFRL-5 and their physical & hazardous properties shall be discussed.

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