

International Symposium on Molecular Spectroscopy

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Title:	SPECTROSCOPIC CHARACTERIZATION OF BEDROCK ^{The author gratefully acknowledges a grant from the Slate Rock and Gravel Company which supported this work.}				Edit										
Body:	<pre>\begin{wrapfigure}{l}{0pt} \includegraphics[scale=0.3]{fred.eps} \end{wrapfigure}</pre> <p>Through careful spectroscopic analysis, we find that bedrock is comprised of a mixture of refractory elements, including silicon, aluminum, and others.</p> <p>In particular, following laser ablation of bedrock, the $3s^2 3p^2 \rightarrow 3s^2 3p^3$ transition of Si at 33,102.897 nm (near 3020 Å) was observed in emission, clearly indicating the presence of silicon. No transitions from silicon-containing molecules were observed, but B.~Rubble^{Private communication} has suggested a search for the ν_2 band of <chem>SiO_2</chem> in the infrared.</p> <p>In stratigraphy, bedrock is the common term for consolidated rock underlying the surface of a terrestrial planet, usually the Earth. Above the bedrock is usually an area of broken and weathered unconsolidated mucky mucky in the basal subsoil. The top of the bedrock is known as rockhead and identifying this, via excavations, drilling or geophysical methods, is an important task in most civil engineering projects. Superficial deposits (also known as drift) can be extremely thick, such that the bedrock lies hundreds of meters below the surface.</p> <p>Yabba Dabba Do!!!!^{This slogan is a registered trademark of Hanna-Barbera Productions.}</p>				Edit										
Details:	<table border="1"> <tr> <td>Length:</td> <td>15 Minutes</td> </tr> <tr> <td>Mini Symposium 1:</td> <td>Beyond the Mass-to-Charge Ratio: Spectroscopic Probes of the Structures of Ions</td> </tr> <tr> <td>Mini Symposium 2:</td> <td>None</td> </tr> <tr> <td>Nominations:</td> <td>Rao Prize: Yes Miller Prize: No</td> </tr> <tr> <td>Comments:</td> <td>Wilma will be so proud.</td> </tr> </table>				Length:	15 Minutes	Mini Symposium 1:	Beyond the Mass-to-Charge Ratio: Spectroscopic Probes of the Structures of Ions	Mini Symposium 2:	None	Nominations:	Rao Prize: Yes Miller Prize: No	Comments:	Wilma will be so proud.	Edit
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Keywords:	<table border="1"> <tr> <td>1</td> <td>Application: Biology, natural substances</td> </tr> <tr> <td>2</td> <td>Molecular Target: Condensed phase</td> </tr> <tr> <td>3</td> <td>Technique: Infrared/Raman</td> </tr> <tr> <td>4</td> <td>Molecular Process/Properties: Spectroscopy as an analytical tool</td> </tr> </table>				1	Application: Biology, natural substances	2	Molecular Target: Condensed phase	3	Technique: Infrared/Raman	4	Molecular Process/Properties: Spectroscopy as an analytical tool	Edit		
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AUTHOR LIST					Edit										
	ORDER	SPEAKER	DISPLAY NAME	INSTITUTION	DEPARTMENT	CITY STATE COUNTRY									
	1	Yes	Fred Flintstone	Rubble School of Mines	Departments of Chemistry and Geology	Bedrock USA									
<p>TITLE BODY DETAILS KEYWORDS AUTHORS</p> <p>Validate Abstract for Submission</p>															

SPECTROSCOPIC CHARACTERIZATION OF BEDROCK^a

FRED FLINTSTONE^b, *Departments of Chemistry and Geology, Rubble School of Mines, Bedrock, USA.*



Through careful spectroscopic analysis, we find that bedrock is comprised of a mixture of refractory elements, including silicon, aluminum, and others.

In particular, following laser ablation of bedrock, the $3s^23p^2\ ^3P_2 \rightarrow 3s3p^3\ ^5S_2$ transition of Si I at $33,102.897\text{ cm}^{-1}$ (near $3020\ \text{\AA}$) was observed in emission, clearly indicating the presence of silicon. No transitions from silicon-containing molecules were observed, but B. Rubble^c has suggested a search for the ν_2 band of SiO_2 in the infrared.

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Time required: 15 min

Keywords: Biology, natural substances — Condensed phase — Infrared/Raman — Spectroscopy as an analytical tool

Mini-Symposia Requested: Beyond the Mass-to-Charge Ratio: Spectroscopic Probes of the Structures of Ions — None

Competing for Rao Prize? Yes

Competing for Miller Prize? No

Comment: *Wilma will be so proud.*