



FIRE & INVESTIGATOR **ARSON**

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What's Inside:

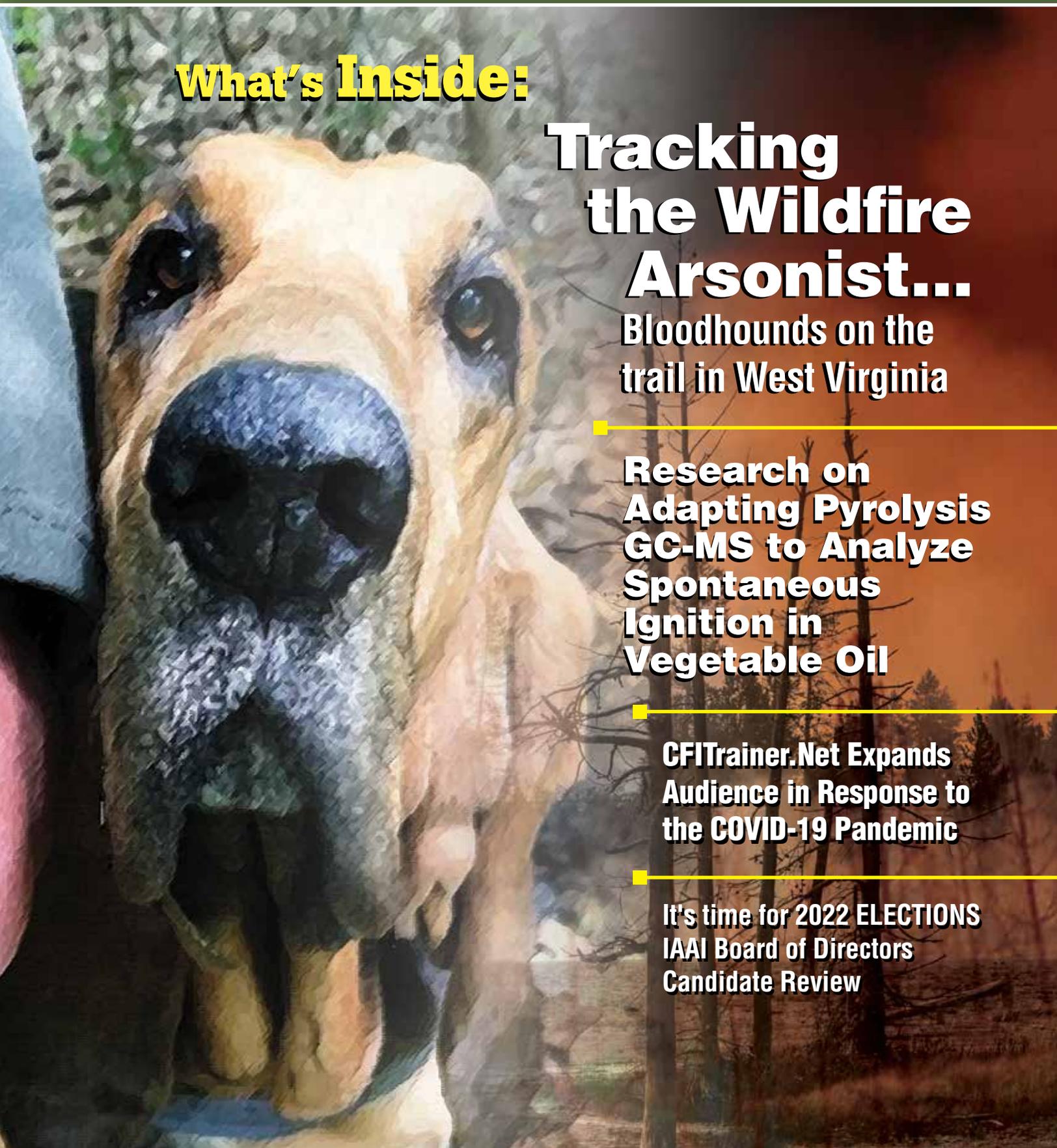
Tracking the Wildfire Arsonist...

**Bloodhounds on the
trail in West Virginia**

**Research on
Adapting Pyrolysis
GC-MS to Analyze
Spontaneous
Ignition in
Vegetable Oil**

**CFITrainer.Net Expands
Audience in Response to
the COVID-19 Pandemic**

**It's time for 2022 ELECTIONS
IAAI Board of Directors
Candidate Review**



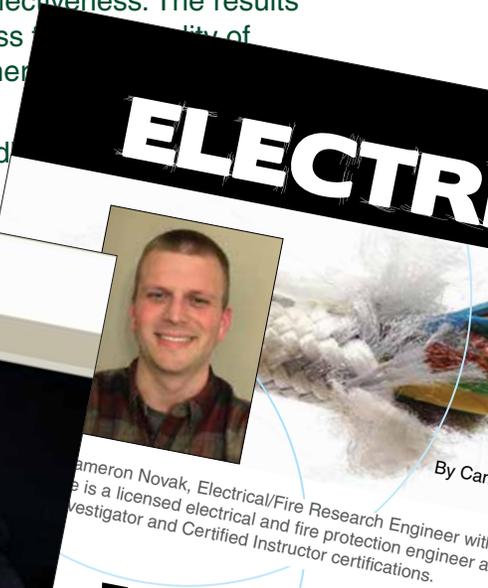
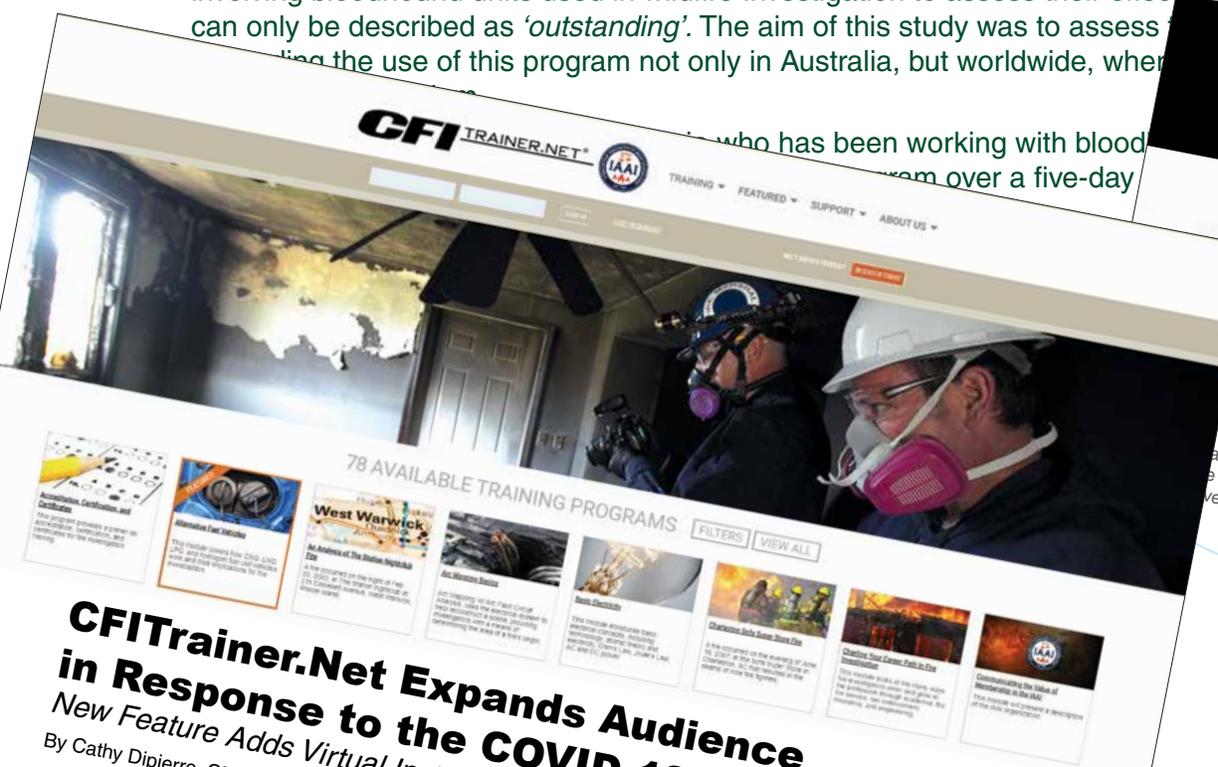


Richard Woods

Tracking the Wildfire Arsonist... Bloodhounds on the trail in West Virginia.

Introduction

Travelling to the State of West Virginia in May 2019, a one-week study was conducted of a program involving bloodhound units used in wildfire investigation to assess their effectiveness. The results can only be described as 'outstanding'. The aim of this study was to assess the utility of using the use of this program not only in Australia, but worldwide, where



ELECTRICAL

By Cameron Novak, Electrical/Fire Research Engineer with a license in electrical and fire protection engineering and Certified Investigator and Certified Instructor certifications.

CFITrainer.Net Expands Audience in Response to the COVID-19 Pandemic

New Feature Adds Virtual Instructor-Led Live Classes and Events

By Cathy Dipierro, CFITrainer.Net

When the COVID-19 pandemic hit hard in the spring of 2020, training opportunities in fire investigation were significantly impacted. For a year, nearly all in-person training stopped. Conferences and in-person classes that professionals rely on to build their knowledge, remain in compliance with NFPA 1033, and earn their credentials were cancelled. While other organizations scrambled for online learning solutions and to offer classes, the IAAI thrived thanks to its leadership and investment in CFITrainer.Net.

With fires, CFITrainer.Net delivers critical training that doesn't require the user to take time off work, travel away from home, expend scarce budget dollars on class fees and travel expenses, or rearrange their schedule. CFITrainer.Net has become so integral to the system of training fire investigators that its online modules are required by organizations that include the National Fire Academy, the Bureau of Alcohol, Tobacco, Firearms and Explosives, and multiple U.S. states. Demand for training on CFITrainer.Net has been stronger and we are always looking for new professional places

Watt Are You Doing?

Before you can "walk the wire" and work with electricity, you must know the basics. In this installment of Electrical Systems, we cover some units and terminology used in electrical systems. It is important to understand these when values are put into equations used and is present in every electrical system.

First, let's start with voltage. Voltage is the electrical "pressure" that moves electrons from areas of high pressure to low pressure. In electrical systems, electrical potential energy is converted to other forms of energy.

Research on Adapting Pyrolysis GC-MS to Analyze Spontaneous Ignition in Vegetable Oil

Pei-Chen Hsieh, Master Ru-Ying Lin, Master Kai-Yi Cheng, Master

ABSTRACT The unsaturated fatty acids contained in vegetable oil can easily bond with oxygen, forming activated oxidized substances. This research aims to analyze the different compounds in oil between pre-heated and post-heated statuses by using pyrolysis gas chromatography-mass spectrometry (py-GC/MS) and evolved gas analysis (EGA), proving the presence of unsaturated fatty acids—linoleic acid. Through experiments of heating towels with linseed oil and soybean oil in different durations, it is found the longer period a towel was heated, the less unsaturated fatty acid remained in the towel. Both lab analysis results and burn pattern characteristics are critical to elevate the level of certainty in determining the causes of fires of spontaneous ignition.

INTRODUCTION

forensic point of view, determine the cause of direct

TECHNICAL SHORTS

meron J. Novak, P.E., ATF – FRL
 at the ATF's Fire Research Laboratory,
 and holds the IAAI's Certified Fire

We Talking About?

the walk” when it comes to
 how how to “talk the talk.”
 Shorts, we’re going to go through
 when referring to electricity and
 use units from the same system
 s. The SI system is most often
 ed in this article.

FISC Bulletin Board

IAAI Fire Investigation Standards Committee (FISC)

Editor's Note
 Due to its length, this article is published in two parts. Below is the article outline showing which sections are published in the Winter 2021 edition (Vol. 72, Issue 3) and the Spring 2022 edition (Vol. 72, Issue 4) of the Fire & Arson Journal by Terry-Dawn He and Wayne J. Mck

Quality Assurance in Fire Investigations: The New NFPA 1321 Standard for Fire Investigation Units

Part I

1. Introduction¹

This year marks a major milestone in the journey the fire investigation discipline is taking to improve the quality assurance for the delivery of fire investigation services. That milestone is NFPA's publication of the initial draft of a new standard: NFPA 1321 *Standard for Fire Investigation Units (FIUs)*.² The main purpose of this article is to acquaint our readers with this new proposed standard and consider its potential role in quality assurance related to the administration and management of FIUs.

This article is in two parts. Part I begins by explaining four essential parts of quality assurance, reviewing where our field stands respecting each one, and considering how NFPA 1321 fits in. Next is an overview of the genesis of NFPA 1321. Then we introduce the NFPA 1321 technical committee and highlight the steps it took to develop the draft. Part I ends with an overview of NFPA 1321's content. In Part II we have a look at how NFPA 1321 advances some of the recommendations by the OSAC's Explosion Investigation Subcommittee's Strengthening Fire Investigation Units

CONTENTS	
Part I (Fire & Arson Investigator Journal, Vol. 72, Issue 3)	Part II (Fire & Arson Investigator Journal, Vol. 72, Issue 4)
1. Introduction	8. Introduction
2. Quality Assurance	9. NFPA 1321 Quality Assurance
3. Accreditation and Proficiency Testing	10. Relating NFPA 1321 to OSAC's Standard for Fire Investigation Report
4. Origins of NFPA 1321 FIUs and Development of its Draft Standards	11. Some Areas of Interest
5. NFPA Technical Committee on NFPA 1321's Content	12. NFPA 1321 Cycle: Key Dates
6. Conclusion to Part I	13. Conclusion
7. Endnotes for Part I	Acknowledgements
	Endnotes to Part II

1) **Standardization**⁵ of the procedures and practices followed by fire investigators;
 2) **Certification**⁶ of individual practitioners (fire investigators);
 3) **Accreditation**⁷ of FIUs, and;
 4) **Proficiency Testing**⁸ to evaluate practitioner (investigator) performance.
 Together these four elements have been described visually as the "Forensic Quality Triangle,"⁹ shown in Figure 1 below.

