David R Day

Resume

David Day received a Ph.D. in Polymer Science from Case Western Reserve University and then held a post-doctoral position at MIT in the departments of Electrical Engineering and Material Science. He is the CTO and a co-founder of SciAps, where he led the development of the first fully self-contained handheld LIBs instrumentation with subsystems that include high resolution spectrometers, time-gated laser rastering, argon purging, internal video, and full on-board data analysis. Dr. Day also served as the technical lead in three prior instrumentation startups including Micromet Instruments (cofounder, sold to Netzsch), Auburn International (sold to Oxford Instruments), and Polychromix (sold to Thermo Fisher). While at Polychromix, he managed the engineering team that developed the NIR spectrometers NASA used (LCROSS mission) to discover water on the Moon's south pole in 2009. He has accumulated extensive experience in most aspects of instrumentation development including spectroscopy (FTIR, NIR, RAMAN, LIBS, NMR, XPS, SIMS), electronics, mechanics, optics, software, algorithms, and chemometrics.. He has more than 50 p scientific publications and has been issued patents.

Publications & Patents

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	Patent #	Title
1	10,697,895	Analyzer sample detection method and system
2	10,209,196	LIBS analysis system and method for liquids
3	9,970,815	LIBS analyzer sample presence detection system and method
4	9,952,100	Handheld LIBS spectrometer
5	9,939,383	Analyzer alignment, sample detection, localization, and focusing method and system
6	9,874,475	Automated multiple location sampling analysis system
7	9,719,853	LIBS analysis system
8	9,714,864	LIBS analysis system
9	9,664,565	LIBS analyzer sample presence detection system and method
10	9,651,424	LIBS analyzer sample presence detection system and method
11	9,568,430	Automated focusing, cleaning, and multiple location sampling spectrometer system
12	9,435,742	Automated plasma cleaning system
13	9,395,243	Handheld LIBS analyzer end plate purging structure
14	9,360,367	Handheld LIBS spectrometer
15	9,267,842	Automated focusing, cleaning, and multiple location sampling spectrometer system
16	9,243,956	Automated multiple location sampling analysis system
17	9,194,743	Raman spectroscopy using diffractive MEMS
18	9,182,278	Wide spectral range spectrometer
19	9,036,146	Micro purge of plasma region
20	8,994,938	Raman spectroscopy using diffractive MEMS
21	7,791,027	Apparatus and method providing a hand-held spectrometer
22	7,505,641	Optical biosensor incorporating wavelength encoding of multiple unlabeled analytes
23	6,008,662	Apparatus and method for measuring conditions in fluidized beds
24	5,681,986	Acoustic sensing
25	5,675,253	Partial least square regression techniques in obtaining measurements of one or more polymer properties with an on-line nmr system
26	5,519,319	Obtaining measurements of improved accuracy of one or more polymer properties with an on-line NMR system
27	5,408,181	NMR system for measuring polymer properties
28	5,396,806	On-line mass flow measurement in flowing two component systems
29	5,184,077	Abrasion-resistant, high pressure dielectric sensors
30	4,777,431	Apparatus for monitoring dielectric changes in polymeric materials
31	4,491,605	Conductive polymers formed by ion implantation