NPO化学物質による大気汚染から健康を守る会

通称：VOC研

24年度の報告と25年度の活動－つづき

2013　Aug. 15

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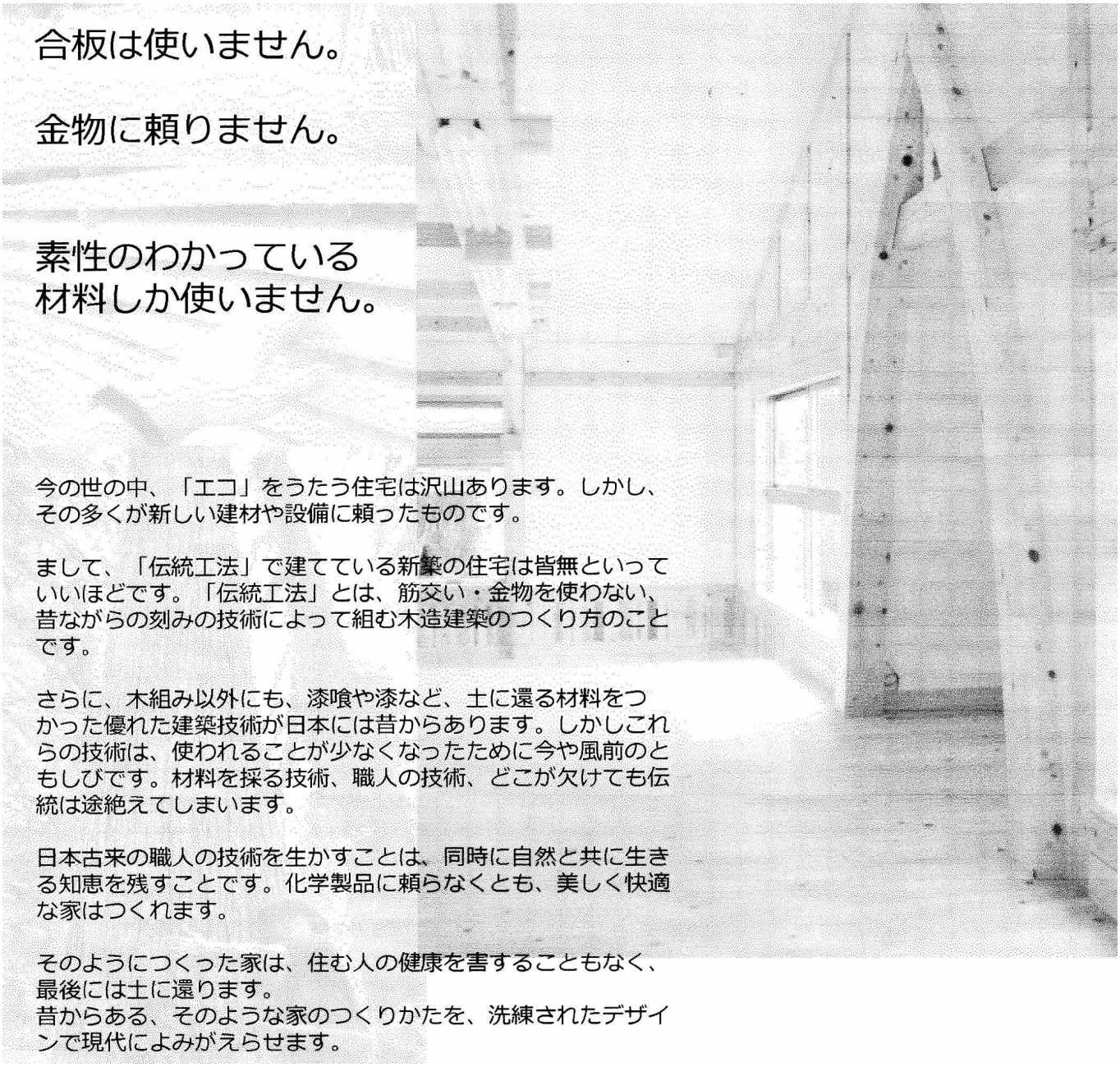

合板は使いません。

金物に頼りません。

素性のわかっている
材料しか使いません。

今の世の中、「エコ」をうたう住宅は沢山あります。しかし、その多くが新しい建材や設備に頼ったものです。

まして、「伝統工法」で建てている新築の住宅は皆無といっていいほどです。「伝統工法」とは、筋交い・金物を使わない、昔ながらの刻みの技術によって組む木造建築のつくり方のことです。

さらに、木組み以外にも、漆喰や漆など、土に還る材料をつかった優れた建築技術が日本には昔からあります。しかしこれらの技術は、使われることが少なくなったために今や風前のともしびです。材料を採る技術、職人の技術、どこが欠けても伝統は途絶えてしまいます。

日本古来の職人の技術を生かすことは、同時に自然と共に生きる知恵を残すことです。化学製品に頼らなくとも、美しく快適な家はつくれます。

そのようにつくった家は、住む人の健康を害することもなく、最後には土に還ります。
昔からある、そのような家のつくりかたを、洗練されたデザインで現代によみがえらせます。

7ｂ．健康住宅（芝静代理事）つづき
7d. ヤマハ・タイヘイのダイキャスト工場による白川病院被害（野尻眞理事）

白川病院直前に出来たアルミダイキャスト工場の操業で白川病院の職員も患者も心臓や呼吸器など著しい体調悪化で、病院業務にも影響した事件です。院長の野尻理事の詳細論文が日本臨床医学会誌に掲載されました。外国では鉄の鋳物工場の砂型粘結剤の分解イソシアネートの被害論文もある事例です。

7e. 杉並病被害者の死に至る化学物質病

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当ＮＰＯ・ＶＯＣ研設立以前の歴史には、杉並病と俗称されるプラスチック主体ごみ中継作業所からのＶＯＣ事件がありました。そのときの被害者で、「被害の専門家」を自称しながらの活動家であった伊田美代子さんが亡くなりました。ご息女の田神によると、「一昨年秋ころから体のあちこちが痛いと大きな病院を回り受診し、間質性肺炎とリュウマチという診断。その後異常な速さで認知症進行、海苔巻きを喉に詰まらせて救急車で入院、新たに膠原病の診断。６月末に肺炎でご逝去。」とのこと。典型的な今のＶＯＣ被害症状で、１５年間闘病されたのでした。公害以前は優雅にお着物を召されて、お琴と編み物の教室を開いていらしたのですが、汚染のために手入れの行き届いた家も琴も着物も手放されて、さびしいアパート住まいになりました。

同様な被害者の斉藤恵子さんが長い病中のお世話をされたとのことです。斉藤さんのご主人も血管がもろくなり、消化器がんの手術後に傷がふさがらずに亡くなられたとのこと。恵子さん自身もホルモン異常などが続いています。杉並病の原因施設は操業停止になりましたが、被害者の体調不良は進行しているということです。少なからぬ被害者のご冥福を祈りながら、多地区でも同様な被害がないようにと切に祈らずには居られません。

14. 編集後記　茨城事業所の仮移転　フローリングのシックハウス

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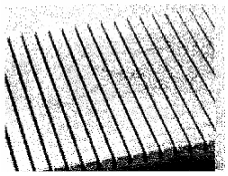
杉のパワーで
日本の山と健康を

会務実行場所である茨城事業所が、今年も仮移転しています。モバイルしか持ってこられないので会務がままならないことが残念です。まん前に11月一杯予定で新築工事があり、団地内道路の水道管交換工事が2月まであるからです。水道管工事では500m先で、工事していたことも知らないうちから庭に出ると声が出なくなって足腰が動かなくなりました。50m先の工事になったら、盛んだった行列の蟻が行列に沿って累々とした屍骸になっていました。（須藤理事が撮影）。仮移転した古いマンションで、来訪中の常陽新聞記者が気分が悪くなり、シックハウスであることが明白になりました。過敏症である津谷の体調悪化がそのせいだったのです。壁はビニルらしい壁紙貼りですが、フローリング、ビニルタイル、畳の3室に別れ、畳の部屋が最良で、フローリングの部屋が極悪でした。風通しよく開放していても、朦朧として短期記憶が喪失、胸苦しさ、脱力が顕著で、閉め切って冷房するとそれらが酷くなり口や喉が痛く咳も出ます。フローリングの日当たり部分が脱色しています。脱色していないフローリングは硬く滑りやすく水をはじき、目地までカバーされている様子から、丈夫な樹脂塗料でコーティングされていることが分かります。昔から使われている固形ワックス（パラフィンや蜜蝋）は無害ですが、樹脂コーティングには主剤として猛毒なアクリロニトリルとポリイソシアネート（ポリウレタンになる前の材料）混合物が普及している模様。こんな混合物がどんな重合で固まり、日光や熱で分解した時に、なんらかのイソシアネートが出来るにはきまっていますが、そのほかにどんな分子が揮発してくるのかデータを見たこともありません。危険極まりないことだけは確かです。監督官庁に知らせるべきでしょうが、何処にどうしたらよいか、思案中なのでご意見をお寄せください。

高機能 杉スリット材
できすぎくん



15. ２５年度も会費をご送金ください。

年会費は、賛助会員:1万円、 正会員:5千円、 支援会員:2千円、
入会費は、賛助会員:1万円、 正会員:5千円、 支援会員:千円、 です。
おついでにカンパも歓迎します。 ご送金内容を書き添えて下さると好都合です。
当座預金への送金用紙を同封しました。

16. アンケート解答用紙　ご返送願い

同封のアンケート用紙にご記入の上、返信用封筒でご返送ください。各地での実施も希望します。

http://isocyanates2012.org/content/index.cfm?service=main&page=conference_media

Isocyanates

Speaker: Gunnar Skarping PhD – Stockholm University

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Description: This session will discuss issues related to measurement of isocyanates in air as well as assessment of dermal exposure. There are a number of methods in existence for sampling and analysis of isocyanates. Factors that determine selection of appropriate methods will be discussed. Concerns about exposure to isocyanates are not limited to use of isocyanate products. Formation of new isocyanate species through thermal decomposition of polyurethanes or other materials or via polymerization chemistry may present an unexpected hazard. Liquid chromatography-mass spectrometry (LC-MS) is becoming more common in isocyanate analysis and is particularly important in the measurement of complex mixtures and difficult matrices such as skin and surfaces. Occupational exposure limits (OELs) vary internationally from species-specific limits to total reactive isocyanate group (TRIG) limits. The compatibility of types of methods with different OELs and with exposure metrics that reflect disease biology will be discussed. Important areas for future research will be identified.

Current Issues in Measurement of Dermal Exposure to Isocyanates

Speaker: Dhimiter Bello ScD, MSc – University of Massachusetts Lowell

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Human health effects of isocyanates: clinical spectrum, pathogenesis, epidemiology and outcomes

Speaker: Carrie Redlich MD, MPH – Yale University

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Description: This session will describe the clinical spectrum, pathogenesis, epidemiology and outcomes of isocyanate asthma, the primary clinical problem due to isocyanate exposure. Hypersensitivity pneumonitis, rhinitis, dermatitis, and other non-cancer human health effects will also be addressed briefly. Clinical studies evaluating pathogenesis, immune responses, management, and clinical and socioeconomic outcomes will be critically reviewed. Epidemiological studies on workers exposed

to the major isocyanates (TDI, MDI, HDI) in primary and secondary production and different end-user settings will also be addressed, including disease prevalence, exposure-disease relationships, and exposure and host risk factors for disease.
The plenary session will be complemented by in-depth presentations related to genetic risk factors, biomarkers, and current high-risk work settings during the breakout sessions.

Health and hazard surveillance for isocyanate exposed workers

Speaker: Phil Harber MD, MPH – University of Arizona, UCLA

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Description: The session will describe systematic approaches for health surveillance of isocyanate exposed groups, considering both hazard surveillance and health surveillance (medical monitoring). The session will consider each of the steps-(1) identifying/accessing at risk worker groups,; (2) methods for early detection of possible isocyanate related disease ; (3) clinical methods to confirm possible cases; (4) workplace management of cases of probable isocyanate asthma; (5) use of case data to foster prevention.; (6) systematic integration of exposure, control measures, and health data. Health surveillance approaches include targeted active worker testing programs as well as passive analyses of existing data. The session will critically evaluate effectiveness of the diverse approaches to case identification and prevention, which may differ for frequent and episodic users.

A Hypothesis-Based Weight-of-Evidence Approach to Evaluate the Human Carcinogenicity of Isocyanates

Speaker: Julie Goodman PhD, DABT - Gradient

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Description: There are few data available regarding the human carcinogenicity of most isocyanates, with the exception of methylene bisphenyl isocyanate (MDI) and toluene diisocyanate (TDI). The International Agency for Research on Cancer has not classified MDI as to its human carcinogenicity. It classified TDI as possibly carcinogenic to humans based on evidence of the tumors observed in experimental animal studies, but no strong or consistent patterns have been observed in epidemiology studies, and recent evidence indicates that tumors in experimental animals are not relevant to humans. This session will discuss the current state of the science regarding isocyanates and cancer. We will discuss the types of data available for evaluating potential human carcinogenicity, including inhalation bioassay, epidemiology, genotoxicity, and toxicokinetic studies. We will also discuss how an hypothesis-based weight-of-evidence (HBWoE) evaluation can allow one to assess the most likely way to account for all of the data relevant to a particular question of causation by evaluating and integrating these data and determining ad hoc assumptions required to support alternative hypotheses. This evaluation includes an assessment of study methods, strengths, and weaknesses, and data gaps, including those that could be addressed with occupational studies. A case study of TDI will be presented.

Concept Applications & Facilitated Discussion

Speaker: Andrew Maier PhD, DABT - Toxicology Excellence for Risk Assessment, NIOSH

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Description: Ongoing science developments in the areas of toxicology models and biomarkers are a key underpinning of the effort to improve the hazard characterization and risk assessment process for isocyanates. The linkage between current toxicology and biomarker research and the goal of a deeper understanding of key metrics of exposure and effect potency will be highlighted in a facilitated discussion.

Isocyanate Biomarkers

Speaker: Leena Nylander-French PhD, CIH – Univ. of North Carolina at Chapel Hill

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Description: Quantitation of the individual exposure dose and determination of a mechanism of action hinges upon identification of appropriate biomarkers of exposure, effect, and susceptibility that can discriminate between acute and chronic exposure. Validation of isocyanate biomarkers requires accurate characterization as well as sensitive and specific analytical procedures to measure them in biological media. This presentation focuses on the tools to investigate the interaction between inhalation and skin exposure to isocyanates and these biomarkers.

Pathways to Pathogenesis: Toxicology & Animal Models

Speaker: Adam Wisnewski PhD – Yale University School of Medicine

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Description: The entry and exit of isocyanate will be discussed, with specific attention to the types of exposure (phase, formulation) at specific sites (airway, skin), and the kinetics of elimination. Next, the biochemical reactions that isocyanates undergo, inside the body, will be addressed, focusing on the formation of allergens, via protein conjugation, and reversible isocyanate-glutathione interactions. The use of animals in modeling exposure, immune sensitization, and asthma will be highlighted through specific examples from the literature, with emphasis on important lessons learned to date.

Consumer Exposures to Isocyanates: What do we know? How can occupational exposures inform us? And what do we need to learn?

Speaker: Andrea Pfhales-Hutchens MS –US EPA

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Description:

Until recently, research on exposures to diisocyanates has focused on occupational exposures. However, there is growing evidence that exposures to diisocyanates may also be occurring to other populations, including homeowners, school occupants, residents living near plants where isocyanates are being manufactured, DIYers, workers not covered by OSHA regulations, and many others. Many of the incidences of non-occupational exposures reported in the literature thus far have been anecdotal; however, they indicate the importance of collecting exposure data and focusing research on potential consumer exposures, especially since they pose many questions that cannot be answered by data collected in occupational settings. This is especially important for isocyanates which require certain conditions and application to cure properly. This talk will focus on the challenges of collecting consumer data on isocyanate-containing products and provide examples of research needs that have been identified by a US Federal Partners Workgroup on spray polyurethane foam.

Worker Exposure Issues: A Challenge to Researchers

Speaker: Andrew Comai MS **-**UAW International

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Description: Polyurethanes are widely used in manufacturing and historically are a leading cause of skin and respiratory disease in the workplace. Worker awareness on the signs and symptoms of exposure is inadequate. Incidents of disease often times are difficult to link to specific exposure scenarios. Current and historical exposure scenarios will be described across a range of products and processes including building products, sports equipment, aerospace equipment, auto parts, automobile and heavy trucks assembly. Drawing on experiences from the production floor, skilled trades' practices, maintenance procedures and emergency spill response the presentation will frame research questions important to workers. Given current advances in research concerning disease mechanisms, exposure monitoring and health surveillance how can we translate this knowledge to improve worker safety?